

Osler 21

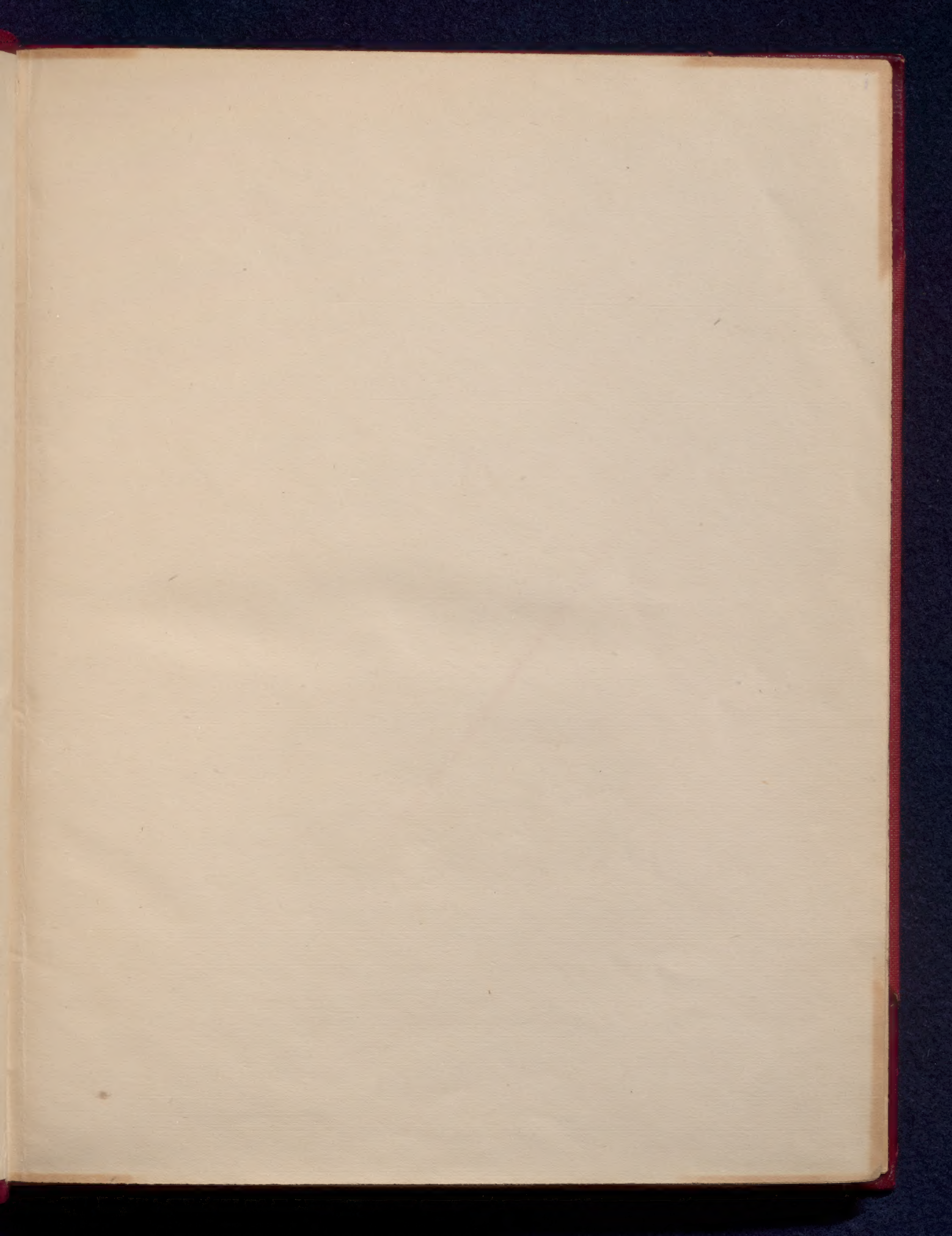
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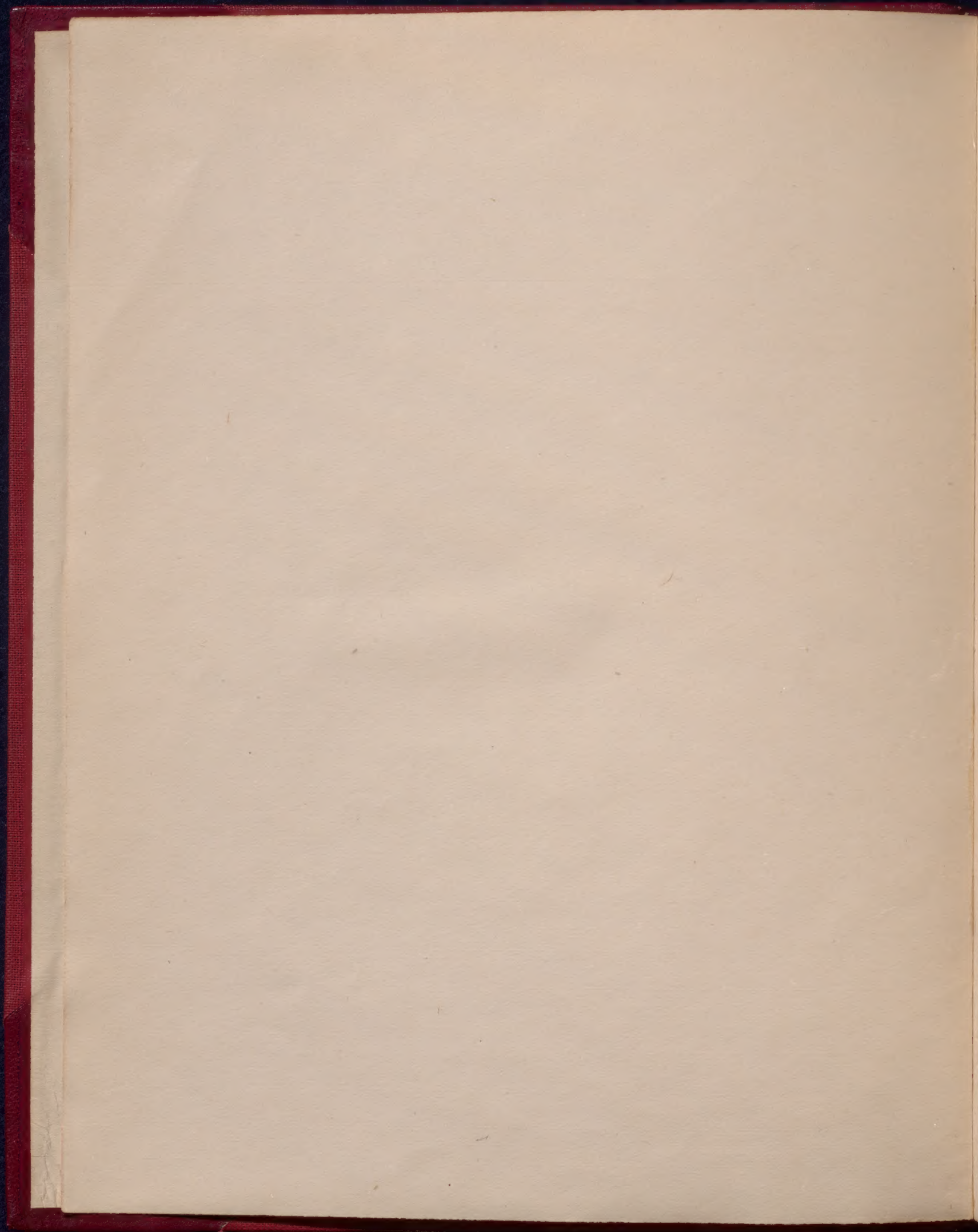
'Beginnings of modern medicine' (? York, 1909).
'Life in the Tropics. Lecture I' (? Oxford, 1911).
'The lessons of Greek medicine. A lecture ...
Oxford, 1910.'

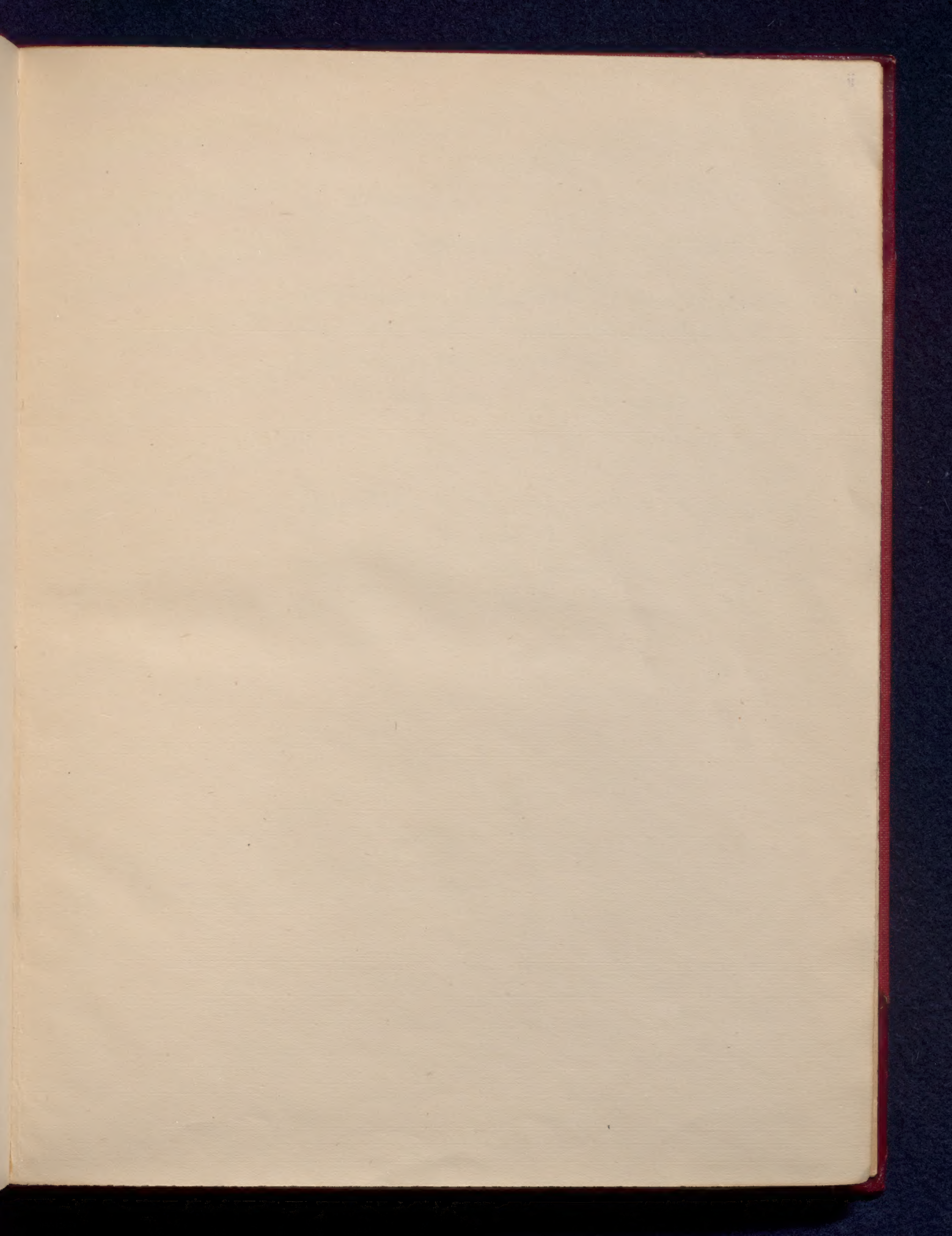
Remarks: (a) 'Specialists and specialism ...
Ophthal. Congress, 1910'; (b) 'Abbots of Reading'
(see no. 4963); (c) at Sheffield University, 1913;
(d) 'The MSS. of Religio Medici' (Roy. Soc. Med.,
1916).

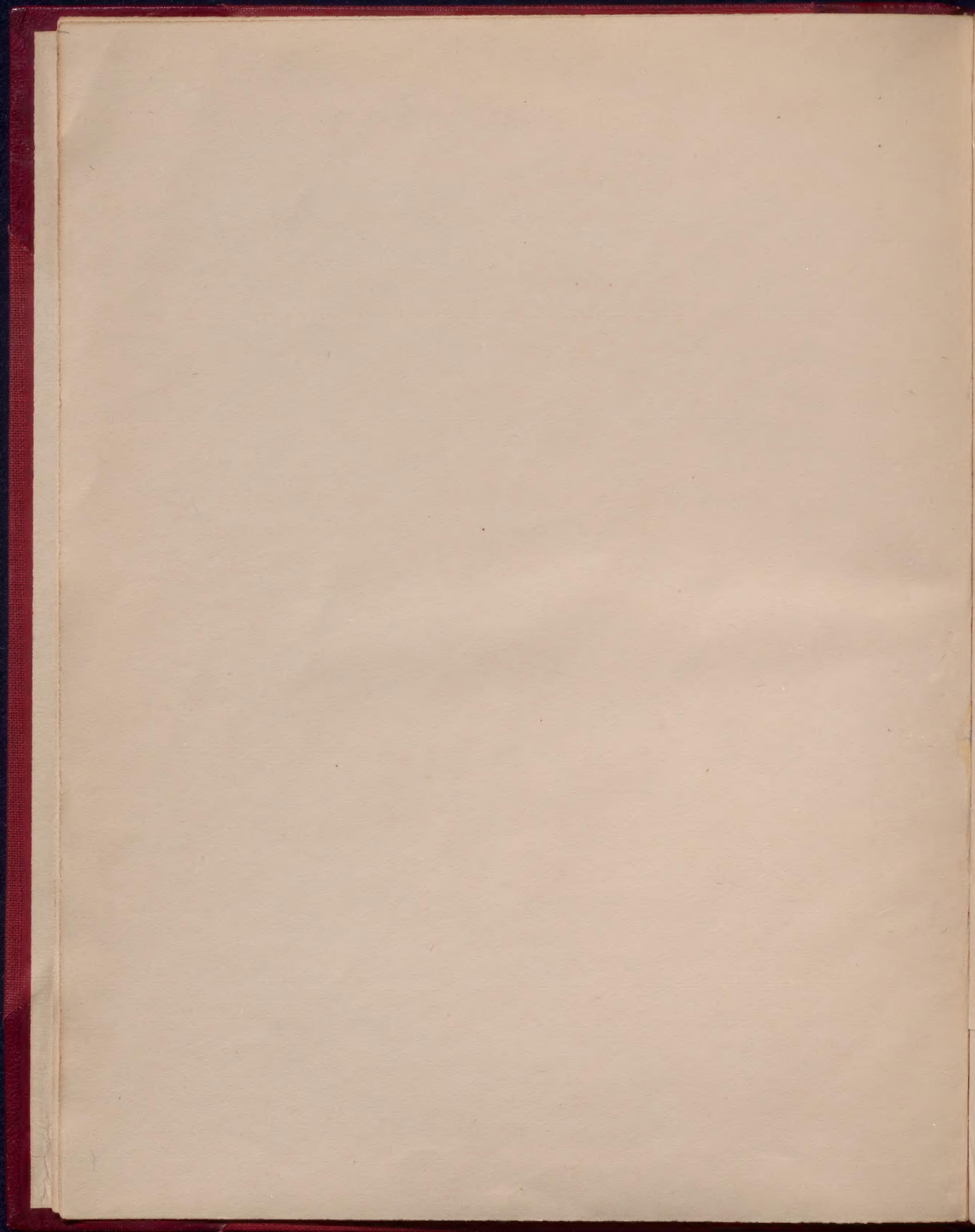
7664 III

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OXFORD









7664, vol. 3.

An address on

"The Beginnings of Modern Medicine"

[not published in full. Written before 1912. Lantern slides were used. Probably delivered before the York Med. Society, Nov. 2nd, 1909 — see report in Brit. Med. Jour., 1909, ii. p. 1370]

[It is stated in the Oxford Times, 1909, Aug. 14, p. 8. that Sir William Osler read a paper before the Oxford University Extension ^{Students} ^{Lecture in the Summer School, Oxford} on Aug. 9. upon "Beginnings of Modern Medicine" and that on Aug. 10. he read "Sennetius" (L. L. M dug up this reference)

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WO's paper on the Beginnings of modern Medicine was read by him at Oxford Extension Courses, North Writing Room, Exam. School of Medicine, Aug. 9, 1909.
see Oxford Times, Aug. 14. 1909 p. 8.

The Beginnings of Modern Medicine.

By William Osler M.D. F.R.S.

"To one small people it was given to create the principle of Progress. That people was the Greek. Except the blind forces of Nature nothing moves in this world which is not Greek in its origin." These words of Sir Henry Maine are as true of Medicine as of Philosophy ^{and Science.} ~~and Natural History.~~ ^{Hippocratic} ^{of Ancient Greece} and ^{To} the work of the ~~Greek~~ Physicians we owe:--

first, the emancipation of medicine from the shackles of priestcraft and of caste; secondly, the conception of medicine as an art based on accurate observation, and as a science, - an integral part of the science of man and ^{of} nature; thirdly, the high moral ideals, expressed in that most "memorable of human documents" (Gomperz), the Hippocratic oath; and fourthly, the conception and realization of medicine as the profession of a cultivated gentleman.

^{in the 3rd & 2nd centuries B.C.}
The Alexandrian ~~school~~ still further developed the importance of observation, and made remarkable contributions to human anatomy and to pathology. Unfortunately only fragments exist of the writings of Erasistratus and Herophilus, the greatest of the ^{Greek school which dominated} ~~Alexandrians~~. ^{medicine for nearly 1000 years.}
Greek medicine reached its climax in Claudius Galen, born in Pergamos about 130 a.d., in whom were united, as never before ^{or since} ~~in science in any~~ physician, the triple combinations of Observer, Experimentor and Philisopher. ^{Living} ~~He lived only~~ for part of his life in Rome, ^{he lived} ~~where he~~ was the physician to successive emperors, and occupying a position of commanding dignity, ^{this remarkable man} In every department of medicine ~~this remarkable~~ ~~man~~ was a reformer and an innovator. Placing the whole foundation of the art in anatomy and physiology, he restored the Hippocratic methods and

The Importance of a Good Education

By William Morris M.A. F.R.S.E.

"It is well known that the value of a good education is not to be measured by the amount of knowledge it imparts, but by the degree to which it cultivates the mind. A good education is one that teaches a man to think for himself, to judge of the truth of things, and to act with wisdom and courage. It is a training which gives a man the power of reasoning, and the ability to apply his knowledge to the solution of the problems of life. It is a discipline which teaches a man to be patient, to persevere, and to overcome difficulties. It is a process which develops the character, and makes a man a better citizen. A good education is a gift which should be valued and treasured by every man who wishes to live a life of honor and usefulness."

The importance of a good education is a subject which has been discussed by many writers and thinkers. Some have said that it is the only way to success in life, while others have said that it is a waste of time and money. But the truth is that a good education is a gift which should be valued and treasured by every man who wishes to live a life of honor and usefulness. It is a training which gives a man the power of reasoning, and the ability to apply his knowledge to the solution of the problems of life. It is a discipline which teaches a man to be patient, to persevere, and to overcome difficulties. It is a process which develops the character, and makes a man a better citizen. A good education is a gift which should be valued and treasured by every man who wishes to live a life of honor and usefulness.

^{simple}
and the ^{moral} pathology of the master,

^{the world of things}
-As in Macrocosm, there were four element, fire, air, earth and w
^{the world of man's body}
water, so in man, the Microcosm, there were four elements or humours,
blood, plegm, yellow bile (choler), and black bile (melancholy),
(as Thomas Phaer says in his "Regiment of Life" (1546) ;-- "which humours
are called ye sones of t e Elementes because they be complexioned like
the foure Elements. For like as the ayre is hot and oist: so is the
blooud hote and moyste. And as fyer is hote & dry: so is cholere
hote and dry. And as water is colde and moyst: so is flume colde
and moyst. And as the earth is colde & dry: so melancoly is cold
and dry". ^{Controlling the actions of} The Spirits ^{of the body were threefold, the natural seated in the}
^{liver & penis, the vital in the heart & arteries, the animal in the brain & nerves.}

After flowing for nearly 1,000 years through the broad plain
of Greek civilization, the stream of ~~scientific~~ medicine is apparently
lost in the morass of the middle ages; but though choked and blocked
likethe White Nile ^{by the Sud.} three channels may be followed through
the weeds of tneological and philisophical speculations. One may be
traced ^{in the direction of} ~~through~~ the Eastern Empire where the great Byantine compilers,
Oribasius, Aetius, Alexander of Tralles, Paul of Agina carried away
in their writing much that was of value in Greek medicine,

(With the fall of Constantinople in 1453, and the dispersion of many
the Greeks there came to Italy ^{many} learned men with literary treasures -
rich papula for the growing ~~renaissance~~ ^{renaissance}.

A second stream may be traced, though with difficulty, through
Southern Italy, always a stronghold of Greek thought,

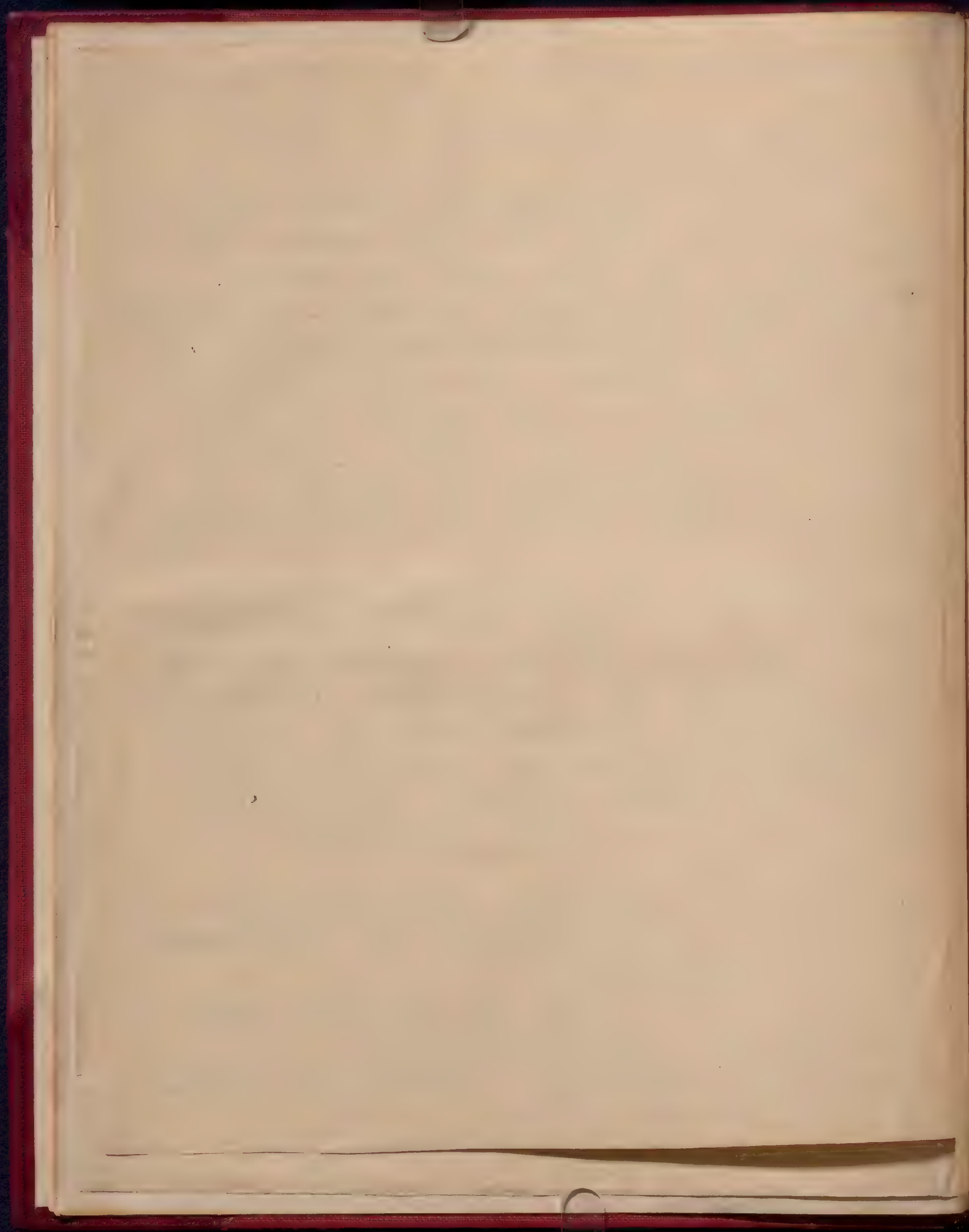
(The origin of the famous school of Salernum ^{a town about 30 miles south east of Naples} is lost in obscurity,

but

to convert him to Islam, promising him the joys of paradise, but

corge

concent



2. Women in the School. Courses
Intermediate. Training
In English version. See also Regimen

But when it comes into prominence in the 9th and 10th centuries, we find it already the seat of a flourishing medical school, with lay professors, whose fame spread throughout Europe and the East.

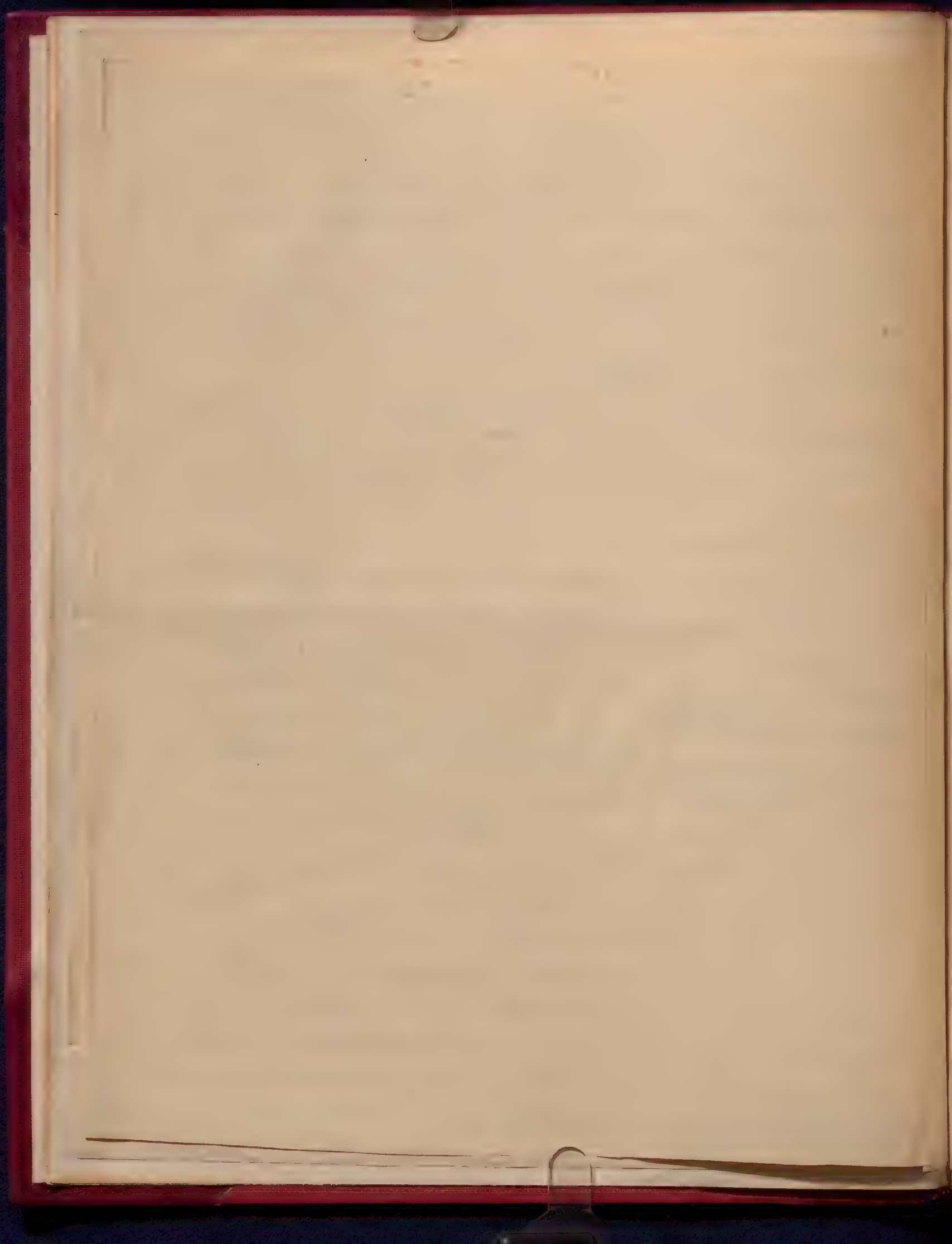
~~until~~ the 11th century Salerno appears to have had its inspiration from Greek or Greco-Roman sources; later with Constantinus Africanus Arabian medicine was introduced.

The third ^{for our purpose the} and much more important stream flowed in Arabian channels. To change the metaphor, ~~from~~ the hands of unworthy successors of Galen and Hippocrates, these wonderful people took the flickering torch of Greek medicine, and if they failed to restore its ancient splendours, they at least preserved it from extinction, and they handed it back burning more brightly than before (*forthrightly*)

~~It was in Egypt that the Arabs first came in contact with~~
Greek medicine, and learnt to appreciate its superiority. ~~There were~~
~~was not directly through translations from the Greek into Arabic, but~~
^{no} ~~chiefly by the work of~~ ^{written directly} the Nestorian medical schools of Edessa and
Gondisapor. ^{the physicians} ~~The Nestorian practitioners with the~~ ^{made translations into} Syriac. ^{Nestorian}
~~translations spread far and wide throughout the East, and became great~~
^{tradition travelled} favourites of the Caliphs. "There is ^a ~~the~~ well known story that in
the year 765 the Caliph al-Mansur, while engaged in founding the city
of Bagdad, was seized with an attack of indigestion, and his friends
urged him to send for George Bachtishua, superintendent of the
Hospital at Gondisapor, and the most famous physician in Persia.
George came, saw, and cured the patient, and the delighted Caliph
retained him at his court for five years, till, smitten with a mortal
disease, he begged to be able to die at home. Al-Mansur then tried
to convert him to Islam, promising him the joys of paradise, but

George

continued



George replied that he would rather go to his ancestors, whether in heaven or hell; so he was dismissed with rich rewards and a special escort, who brought him yet living to Gondisapor." (*Arcturion*)

~~Several of the works~~ ^{The writings} of these Syrians were popular ~~all~~ ^{in fact} through the middle ages until the 16th century. Of these ~~The~~ ^{a book} most famous was Mesue, ~~one of whose works~~ ^{one of whose} was one of the three first medical books to be printed, in 1471. And editions of ~~this~~ ^{his} 'Opera Omnia' appeared in the 17th century.

It was not until the ninth century that ~~the~~ ^{native} great Arabian physicians appeared. Rhazes, ~~whose name~~ still famous in the annals of medicine, ^{was} not only was a medical chemist, but he was the first to give an accurate ^{description} ~~account~~ of small-pox, and to separate it from measles. On account of ~~his~~ originality and zeal for chemical studies he was known as 'the Experimentator'. His work 'the Continens', bulks large (in both senses) in medical literature. He may be said to be the only Arabian to have enjoyed ^{such} ~~continuous~~ popularity, ^{that} ~~since~~ his works ~~alone~~ ^{continuously} have reappeared during the past five centuries. ^P But the greatest of the Arabians, known throughout the middle ages as 'Prince', the rival indeed of

Galen, was the ~~great~~ Persian Ibn Sina, better known as Avicenna.

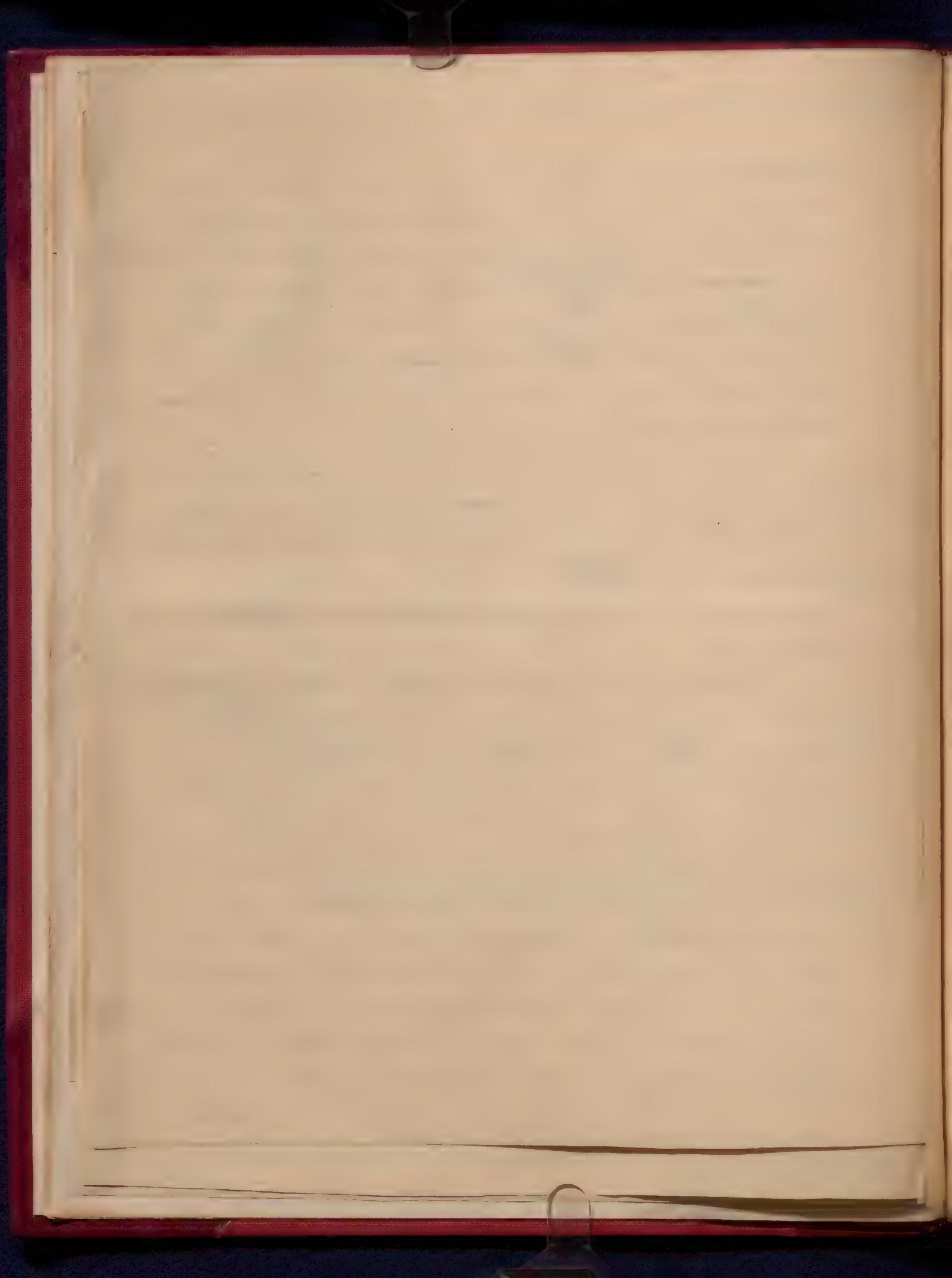
Born in the province of Bokhara about 1000 A.D.

This extraordinary ~~man~~, who ~~flourished~~ about 1000 A.D., was ~~born in the Province of Bokhara~~. He has left an interesting though brief, autobiography, in which he states that he could repeat the Koran by heart when ten years old, and that at twelve he disputed in law and logic. He found medicine a very easy study, not hard and thorny like mathematics and metaphysics. He

studied

only the primitive (exciting), antecedent (predisposing), and

concurrent

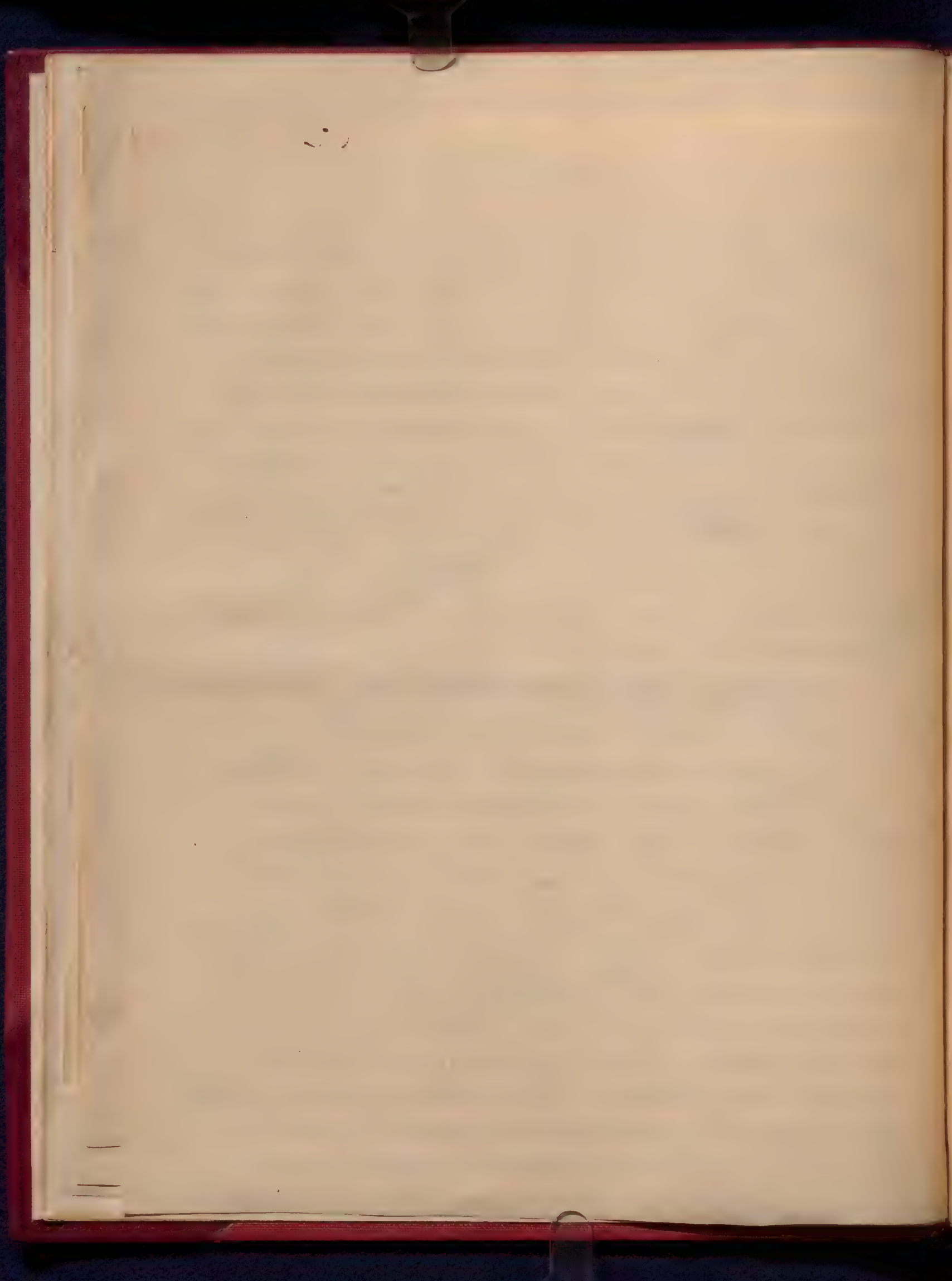


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he ~~suffered~~^{was} night and day and could solve problems in his dreams. "When I found a difficulty" he says, "I referred to my notes, and prayed to the Creator. At night when weak or sleepy I strengthened myself with a glass of wine". Unfortunately this drink habit grew upon him in late years, and ~~Freund tells us that~~ there was a contemporary saying 'that all his philosophy could not make him moral nor all his physic teach him how to preserve his health'. He was ~~not only a physician, but a philosopher, astronomer and statesman.~~ ^{he also} ~~he also~~ great ^{reputation} as a poet. Some of his quatrains, as Professor A.V.W. Jackson ^{remarks} ~~suggests~~, are peculiarly Anayyamesque, and though he anti-dated Omar by a century, "that large infidel" might well have written such a verse as ~~this~~: --

From Earth's dark centre unto Saturn's Gate
I've solved all Problems of this World's Estate,
From every Snare of Plot and Guile set free,
Each bond resolved -- saving alone Death's Fate.

~~It is not too much to say that~~ Avicenna ruled as a prince ^{then} in the kingdom of medicine for 600 years, rivalling, and in places disputing the sway successfully with the great Galen. He wrote scores of treatises, only a few of which have been translated into Latin. Of these "the Canon" became the popular text-book of Europe. Scores of editions appeared in the 15th and 16th centuries, ^{the last} ~~it was reprinted as late as~~ 1663. His main object in "the Canon" was to reconcile the doctrines of Aristotle with those of Galen, just as St. Thomas Aquinas, two centuries later, reconciled them with those of the Catholic Church. Thus in speaking of the causation of diseases, he discusses not only the primitive (exciting), antecedent (predisposing), and conjoint



conjoint (proximate) causes of Galen, but also the material, formal, effectual, and final causes of Aristotle, a combination which could not fail to impress the Mediaeval physician, who held that where Galen and Aristotle differed none could decide, and that where they agreed none could dissent. ^{He died} He died in his 58th year in 1036. ~~It is said that~~ When he saw that physic was of no avail, resigning himself to the inevitable he sold his goods and distributed the money to the poor, read the Koran through once every three days, and died in the holy month Ramadan. His tomb ^{was at} at Hamadan, the ancient Ecbatana described by Jackson as a single brick work building, rectangular in shape, and surrounded by an unpretentious court-yard. Having fallen into ruins it was restored in 1877.

The Western Caliphate produced physicians and philosophers almost as brilliant as those of the East. Remarkable schools of medicine were founded at Seville, Toledo and Cordova. The most famous of the professors were Averroes, Albucasis and Averroes. Albucasis ^{was} ~~may be called~~ 'the Arabian restorer of surgery'. ^{Averroes called} ~~known~~ in the middle ages as 'the soul of Aristotle', or 'the Commentator'. ~~He~~ is better known today among philosophers than physicians. On the revival of Moslem orthodoxy he fell upon evil days, and was persecuted as a free-thinker, and there is ^{attributed to him} ~~the oft-quoted~~ saying "Sit anima mea cum philosophis".

Arabian medicine had certain very definite characteristics. The basis was Greek derived from translations of the works of Hippocrates and of Galen. No contributions were made to anatomy, as dissection was prohibited. A few new and important diseases were and especially is it contrary to the purity and honour of our



were discovered and described. ~~Info~~ introduced a large number of new and active remedies, particularly from the vegetable kingdom. ~~They~~ may be said to have created the science of chemistry, ^{the} subsidiary science of pharmacology, and ^{what is still more important} ~~as has been well said,~~ "The Arabians preserved a lay medicine at a time when, ~~as~~ in the West, priests and monks only, in christian ignorance, treated the sick with superstitious remedies". (Witthagen)

While Greek tradition appears to have lingered in Southern Italy, and found its best expression of the middle ages in the early days of the school of Salernum, over the greater part of Christendom the dark pall of ^{ignorance} ~~superstition~~ had settled, ^{and the profession of medicine sank to its lowest position} Neither observation nor experiment play ^{any} ~~much~~ part in the medical writings from the 5th to the 12th centuries. The saints had supplanted the physicians. "St. Gregory of Tours rebukes Leonastes the Archdeacon, because while trying to cure a disease of his eyes by fasting and prayer at the shrine of St. Martin, he had also called in the aid of a physician". (Witthagen) The same writer says:-- "At a much later period, we find St. Bernard of Clairvaux strictly forbidding his sick monks to have anything to do with physic or physicians. Let them think of the words of the apostle (2 Cor. xli. 9), and hesitate to use earthly remedies at the risk of their eternal salvation. The occasional use of herbs from the monastery garden may, indeed, be tolerated; but to buy drugs, to consult physicians, to take medicines, befits not religion (religioni indecens est), and is contrary to purity, and especially is it contrary to the purity and honour of our



order, for after all these things do the Gentiles seek, but we know that they who live in the flesh cannot please God!" *B. Leclercq*

A great change took place in the 12th century. Through the translations of Gerardus of ^{and Constantine Africanus} Cremona, Arabian medicine was introduced into France and Italy. Living at Toledo for more than half a century, ~~he~~ ^{he} made more than 70 translations of the books of the more important medical writings, some direct from the Arabic, ~~some~~ ^{others} from the Hebrew *43*

~~As~~ Between the 9th and the 13th centuries the Jews had become among the most important practitioners in Spain. In the 13th century, with its wonderful renaissance in literature, painting, law, theology, and architecture, medicine received an immense impetus. The translations from the Arabian writers restored the writings of Hippocrates of Aristotle and of Galen, ~~often~~ ^{often}, it is true, in ^a ~~the~~ debased and perverted manner, but ~~mixed~~ with the dross there was much pure gold.

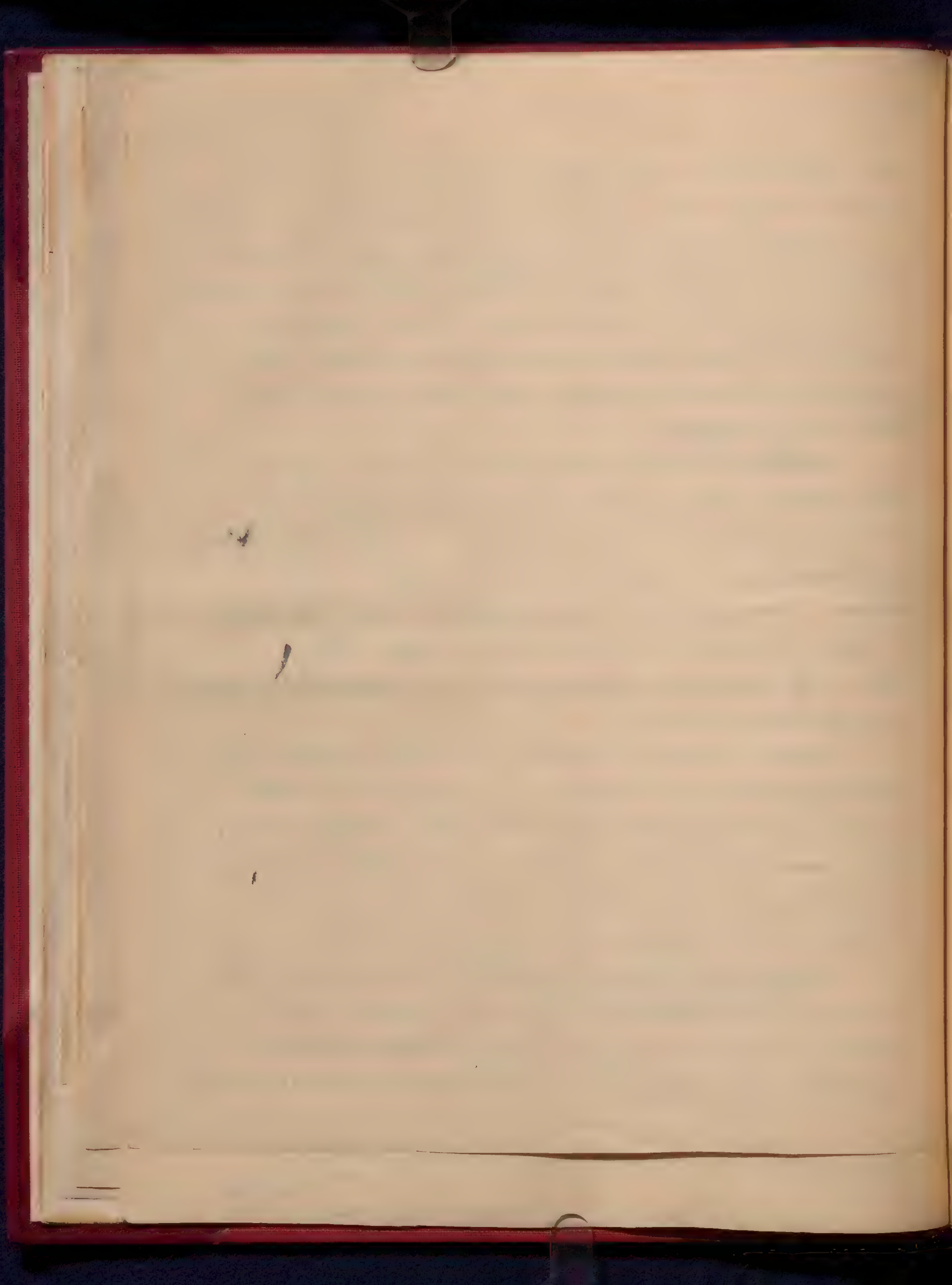
Rhazes, Avicenna and Averroes ruled equally powerful with Hippocrates, Galen and Aristotle. The translators multiplied, and their writings were soon spread broadcast throughout Europe, and had no doubt, an immense influence in stimulating the intellectual awakening of the 13th century. Le Clerc in his time found no less than 300 translations from the Arabic into Latin.

~~And out of it came about that~~ ^{in the 12th & 13th centuries came} With the origin and growth of the University, ~~is associated~~ a new era in medicine, the importance of which was recognized by all the ~~great~~ students of this period. For example Here at Oxford, the two greatest men of

U. S.

As Freind says he was always ready to take advantage of the credulity

of



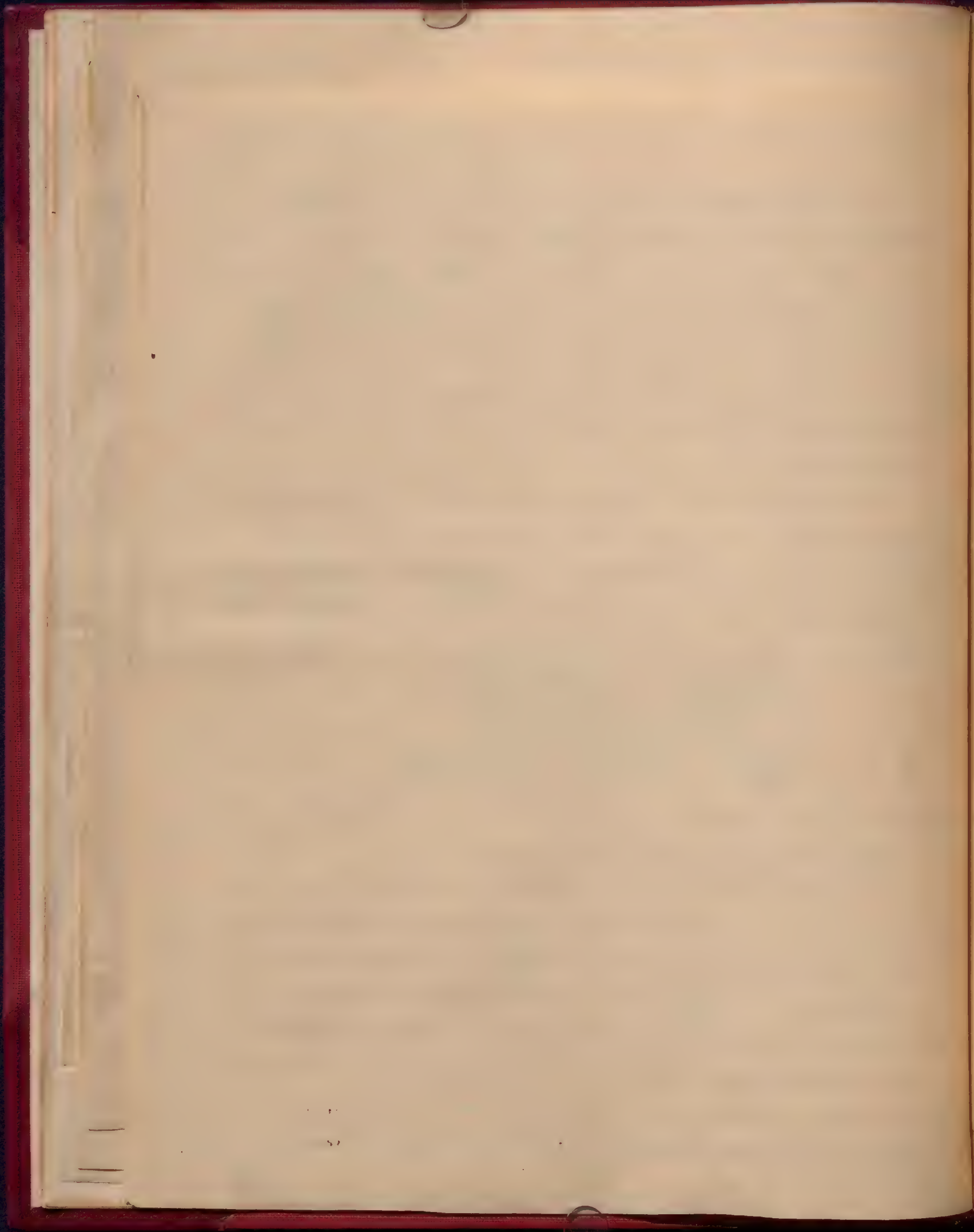
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this century were both students and writers in medical subjects.
Robert Grossetête was as Rashdall ^{perceives} says, a French poet, an agriculturist, lawyer, physician and a preacher. Roger Bacon had already grasped the secret that only by observation and experiment could progress be made in science, and medicine came within the wide range of his studies. One of his books on the cure of old age and the preservation of youth, ~~is~~ first printed at Oxford in 1590, and is still referred to.

But ^{the} more characteristic illustration of the Oxford teacher and physician of this period is the Merton man, John of Gaddesden, author of the well known "Rosa Anglica". A contemporary of Chaucer, from him is doubtless drawn the delightful portrait of the Doctor of Physic in the Canterbury Tales:

'Well knew he the old Aesculapius
And Dioscorides, and eke Rufus;
Old Hippocras, Hali, and Galien,
Serapion, Rasis, and Avizen;
Averroes, Damascene, and Constantin,
Bernard, and Gatisden, and Gilbertin.'

Beautiful manuscripts of the Rosa Anglica are in the Bodleian, and in the college libraries, particularly ⁱⁿ Merton.

I have here the editio princeps, Pavia, 1492, which has an interest as the first printed medical work of an Englishman. It is Arabian throughout, and the names of Rhazes and Avicenna occur more frequently than Hippocrates or Galen. Each disease is described quite systematically, and he gives numerous instances of his personal experiences, as for example, the cure of the young Prince Edward, ill with small-pox, by the use of red blankets. As Freind says he was always ready to take advantage of the credulity



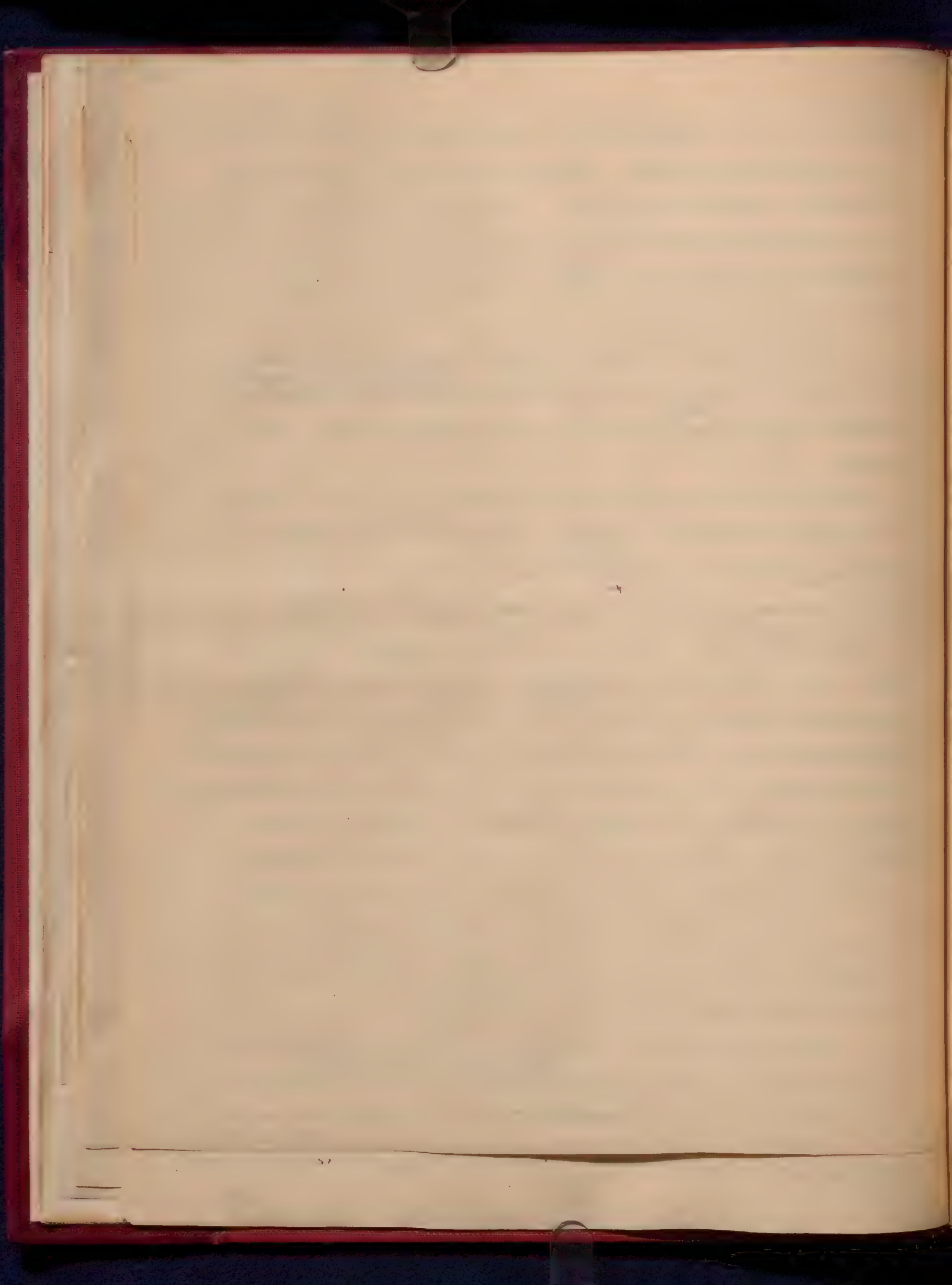
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of patients, and was very artful in laying baits for the delicate
the ladies and for the rich. He has instructions for the making
of perfumes, washes and hair-dyes. He recognized too the foible
of the rich for the rare and the dear sorts of medicine, and if
he found anything very good indeed he ordered twice the amount for
them as he did for the poor.

Unfortunately there was no Faculty organization in medicine
and it cannot be said that much good came to ^{permanent} ~~the stimulation of~~ ^{to medicine}
~~medicine~~ at Oxford ^{from} by the revival of the learning in the 13th
century.

Two universities were specially associated with the revival
of the study of medicine in Europe, Montpellier and Bologna.
From its proximity to Spain ^{the former} ~~it~~ was early influenced by Arabian
culture, and by the flourishing schools of medicine already
mentioned. ^{While it's} ~~The origin of the University~~ is wrapped in obscurity,
but it seems certain that ~~the study of~~ medicine at first played
a much more important part ^{that of} than law, art or theology. In contrary
~~distinction~~ to the North Italian method of organization, Montpellier
was controlled by the masters or teachers, but there was an admirable
system of co-operation between them and the students, which as
Rasndall remarks "constitutes one of the few pieces of medieval
student-autonomy which might possibly be imitated with advantage
by the modern university reformer". Montpellier became the
strong-hold of Arabian tradition, and remained faithful to the
great Avicenna until long after the renaissance.

One of the most important contributions made by Montpellier
^{was} ~~is~~ the revival of surgery ^{by these distinguished men} ~~in the persons~~ of Henry of Mondeville
and Guy of Chauliac, both ~~of whom~~ were clear headed able men, who
appreciated

In the process of translation from Greek to Syriac, and
from Syriac to Arabic, and ~~from~~ Arabic to Hebrew, and from Hebrew
or



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appreciated with remarkable accuracy the relations of medicine and surgery.

The greatest name in medicine proper in the early days of the University, is Arnold of Villanova, a Spaniard, a Doctor in the four faculties, an ardent theological reformer who narrowly escaped the usual fate of the heretics. To him we owe the first edition of the famous popular work of the school of Salernum already referred to. I have here the first printed edition, published in 1480.

It was in the free student university of North Italy that medicine made rapid progress in the 13th and 14th centuries. At first the studies were controlled by Arabian thought, introduced from the school of Salernum, and possibly from Montpellier. For example, to the astrological aspects of medicine, always a favourite study with the Arabians, special attention was paid, and there was a salaried professor of the subject, ^{whose} ~~and the~~ lectures were among the most popular in the university. The surgical studies ^{also} made rapid progress, and the writings of Roland and Theodoric had a wide influence. ~~But what gives to Bologna~~ ^{has a} its special interest to us, ^{is} the revival in the 13th century of the study of anatomy.

For more than 1000 years no advance had been made in the knowledge of the structure of the human body. Though debarred from human dissection, Galen had left a wonderful ^{account} ~~description~~ of the animal frame. His description of the bones, for beginners, might, with very little alteration, be used ^{to-day} for senior classes in hygiene.

In the process of translation from Greek to Syriac, and from Syriac to Arabic, and ~~from~~ Arabic to Hebrew, and from Hebrew or



or Arabic to Latin, both the form and thought of the great master not infrequently became confused, and more often ^{perverted} ~~observed~~. Still there do exist very ~~very~~ plain and direct translations of the anatomical works into Arabic. In ^a ~~one~~ manuscript in the Bodleian ^{now} ~~which was~~ translated by that distinguished scholar, the late Dr. Greennill, has recently been edited and ^{published} ~~translated~~ into Germany by Dr. Simon.

Our earliest information of the teaching of medicine in Bologna is connected with ^a ~~the~~ ^{contemporary} of Dante Taddeo, for whom is claimed a combination of Arabian erudition ^{with the} ~~and a~~ Greek spirit. He occupied a position of extraordinary prominence, being regarded as the first citizen of a city, a public benefactor, who was exempted from the burden of paying taxes. That he should have acquired great riches is not surprising if all his fees were at the rate which he charged Pope Honore iv, 200 florins a day, besides a 'Gratification' of 6,000 florins.

But the man who influenced most powerfully the progress of medicine in Bologna was Mundinus, the first modern systematic student of anatomy. It was only with ~~the greatest~~ difficulty that permission was obtained for the dissection of human bodies. At the school of Salernum, in the middle of the 13th century, it was decreed that a human body should be dissected at least once in five years. It is very probable that under the strong influence of Taddeo there was an occasional dissection at Bologna. But it was not until Mundinus took the chair that the study of anatomy became popularised. He held the chair from 1306-1326. There must have been great difficulty in procuring subjects. There

is
lantern slide of which I will show you, is a sepulchral bas-relief
on the wall of the church of San Vitale



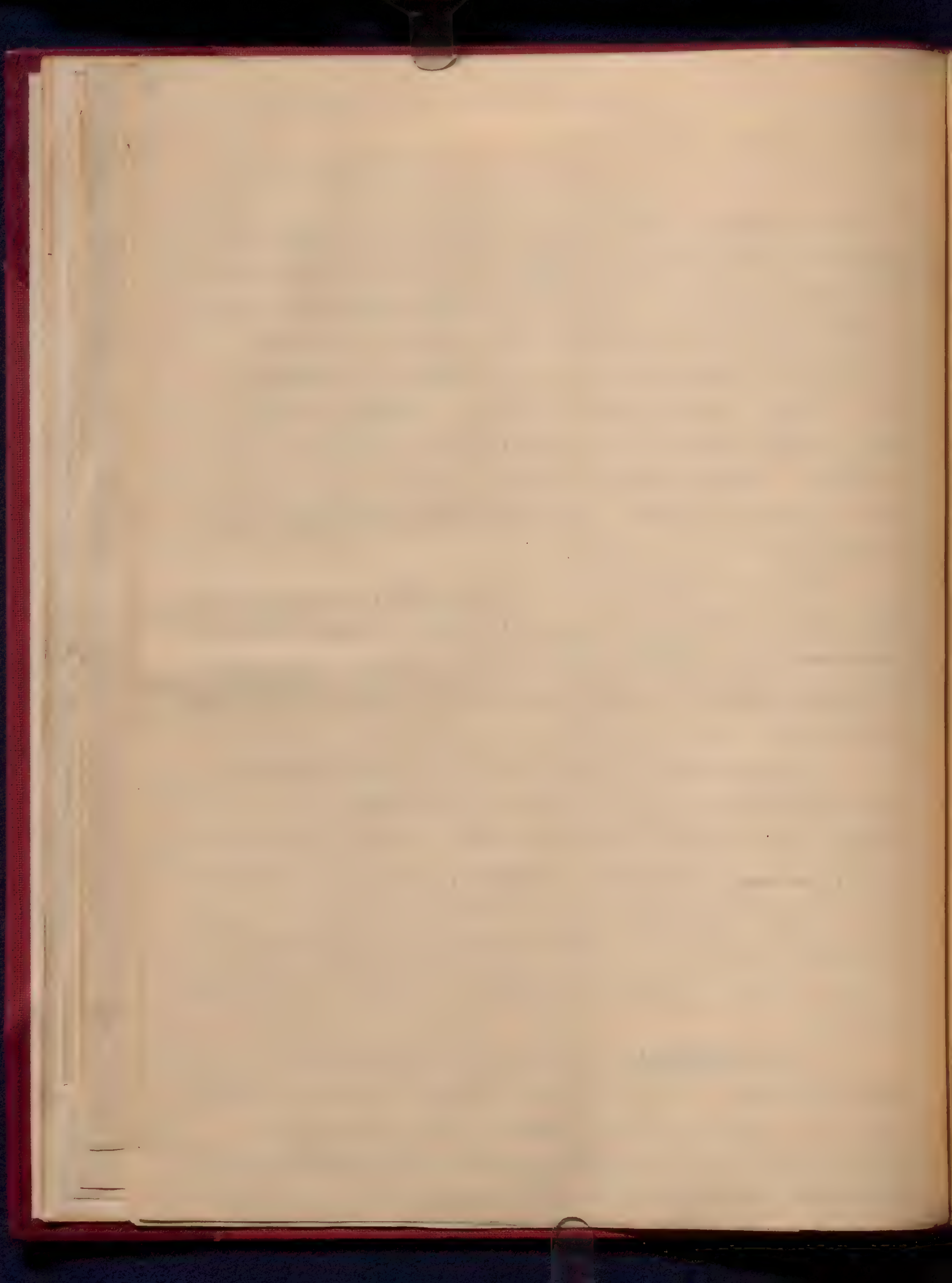
is extant a record of legal procedure in 1319 against four medical students for body snatching, ^{the year} as far as I know, the first record of this gruesome practice. In 1316 ^{Mundinus} he issued his book which for more than 200 years served as the text-book on anatomy. He quotes from Galen the amusing reasons why a man should write a book:-- first to satisfy his own friends; second, to exercise his best mental powers, and third to be saved from the oblivion incident to old age. ~~The book was~~ first printed at Pavia in 1478, in a small folio without figures, ~~it~~ was very often reprinted throughout the 15th and 16th centuries,

Scores of Manuscripts must have existed, and yet, strange to say, with the exception of one little scrap at Padua, I could find no ~~manuscript~~ ^{Manuscript note} of it in the Italian Universities. The later 15th century editions had quaint illustrations, some of which I will show you at the end of the lecture.

~~As indicating~~ the study of medicine by women, to which I have already referred ^{as} the custom at Salernum, ~~it~~ may be mentioned that Mundinus ^{had} a valuable assistant, a young girl, Allesandra Giliani, ~~She was~~ an enthusiastic dissector, and if what is recorded in the old chronicle be true, she must have been the first to practise the injection of the blood vessel with coloured liquid. It is sad to think that she died consumed by her labours at the early age of 19.

Bologna honoured its distinguished professors with magnificent tombs, 16 or 17 of which, in wonderful state of preservation, may be seen in the Civic Museum. That of Mundinus, a lantern slide of which I will show you, is a sepulchral bas-relief on the wall of the church of San Vitale

on



The 13th century ^{was} ~~not~~ ^{fairly early with it} the dawn, ~~there were~~ ^{there were} roseate hues,
but ~~another~~ 200 years had to pass before the ~~full~~ ^{brilliant} glory of the ~~renaissance~~ ^{renaissance}

^{Renaissance} But before we speak of the characteristics of ~~that~~ ^{that}
~~period~~ ^{period}, and its influence on medicine, let us take a glance at the
personel and the ^{medical} studies of a university at the close of the
scholastic period. In the papers of the Ferrari family there are
details of the greatest interest about the University of Pavia,
at which Giammettio Ferrari da Grado was ~~the~~ ^{the} professor from 1432
to 1472. (1),

One is surprised to find the width of range of the studies
in certain directions, and the large ^{size of the staff 32 in all} ~~number~~ of teachers, there
^{Special} were lecturers ~~for the morning, the afternoon, and the evening,~~
~~Lectures~~ on medicine, on practical medicine, on physics, on logic,
on metaphysics, on rhetoric, natural philosophy, surgery and astrology.
^{Very} ~~More~~ striking is the omission of ~~the subject of~~ anatomy, nor does ~~this~~ ^{subject}
~~appear in the list of subjects given for the year 1433,~~
~~There was a staff of 32 teachers.~~

— The remarkable dominance of the Arabians is shewn by the
catalogue of the books in Ferrari's library. More than one half
of those on medicine are Arabian commentaries on Greek medicine.

(1)
Une Chaire de Médecine.
au 15^e siècle.
Paris 1899.

or served health, cured the disease, or did the opposite.

The



A still more striking evidence of this is the popular work by Ferrari called "Practica", ^{one of the first three medical books to be printed} in which it is stated that the citations from Avicenna number 3,100, from Rhazes 1,280, from Galen 1,100, and from Hippocrates 140.

The Greek doctrine of the four humours coloured all the concep-
-ions of disease; ~~as~~ ^{it was thought that} upon their harmony alone health depended.

The four temperaments, sanguine, plegmatic, bilious and melancholic, corresponded with the prevalence of these humours. The body was composed of certain natural things, seven in number, the elements, the temperaments, the humours, the members or parts, the virtues or faculties, the operations or functions, and the spirits.

Certain ^{non-}unnatural things ~~which~~ preserved the health of the body were six, ^{in number} air, food and drink, movement and repose, sleeping and waking, excretion and retention, and the passions. Disease was due usually to alteration in the composition of the humours, and the indications for treatment were in accordance with these doctrines.

The ~~humours~~ were to be evacuated, tenuated, cooled, heated, ~~and~~ ^{or} purged and strengthened. This humoral doctrine ~~of disease~~ ^{and} not only prevailed throughout the middle ages, but reached far into modern times, ^{indeed} ~~and~~ echoes of it are still to be heard in popular conversations on the nature of disease.

The Arabians were famous for their vigour and resource in matters of treatment. Bleeding was the first resort in a large majority of all diseases. In the "Practica" of Ferrari there is scarcely a malady ^{for} in which it is not recommended. ^{remedies} All were directed to the regulation of the six non-naturals, and they either preserved health, cured the disease, or did the opposite.



The most popular ^{medicine} ~~remedies~~ were ~~those~~ derived from the vegetable kingdom, and as they were ^{those recommended by} ~~those chiefly used in the~~ Galenic system, they were, and still are, called by his name. Many important ~~materials~~ mineral medicines were introduced by the Arabians, particularly mercury, antimony, iron etc. There were in addition scores of substances the parts or products of animals, some harmless ^{others} ~~and~~ salutary, ^{others again} ~~many~~ useless and disgusting.

The surgery was in the hands of the barbers, who performed all the minor operations, such as bleeding; the larger and important ^{few in number} operations were done by surgeons.

Many of the most distinguished physicians believed in the influence of the stars, and the celestial signs were often consulted as to the progress of a disease, or of wounds -- a deeply engrained popular belief which has not wholly disappeared at the present day.

Always a reflex or an index of its period, medicine joined heartily in the revolt against mediaevalism, which characterised the latter half of the 15th century. The renaissance gave it three things. In the first place a new spirit; ^{it} has been remarked ^{that} -- 'Greece arose from the dead with the New Testament in one hand and Aristotle in the other', ^{There was awakened} ~~There arose~~ a perfect.

^{and Greek literature & with} ~~In the~~ passion for the fathers, ~~aroused~~ by the study of the original sources, Hippocrates and Galen came to their own again; ~~and~~ against the Arabians there came a revulsion of feeling, the intensity of which we are not able to appreciate.

Almost every professor of medicine became the student of the manuscripts of Plato and of Aristotle, as well as of the Greek physicians, and before 1530 the presses had poured out a stream

of



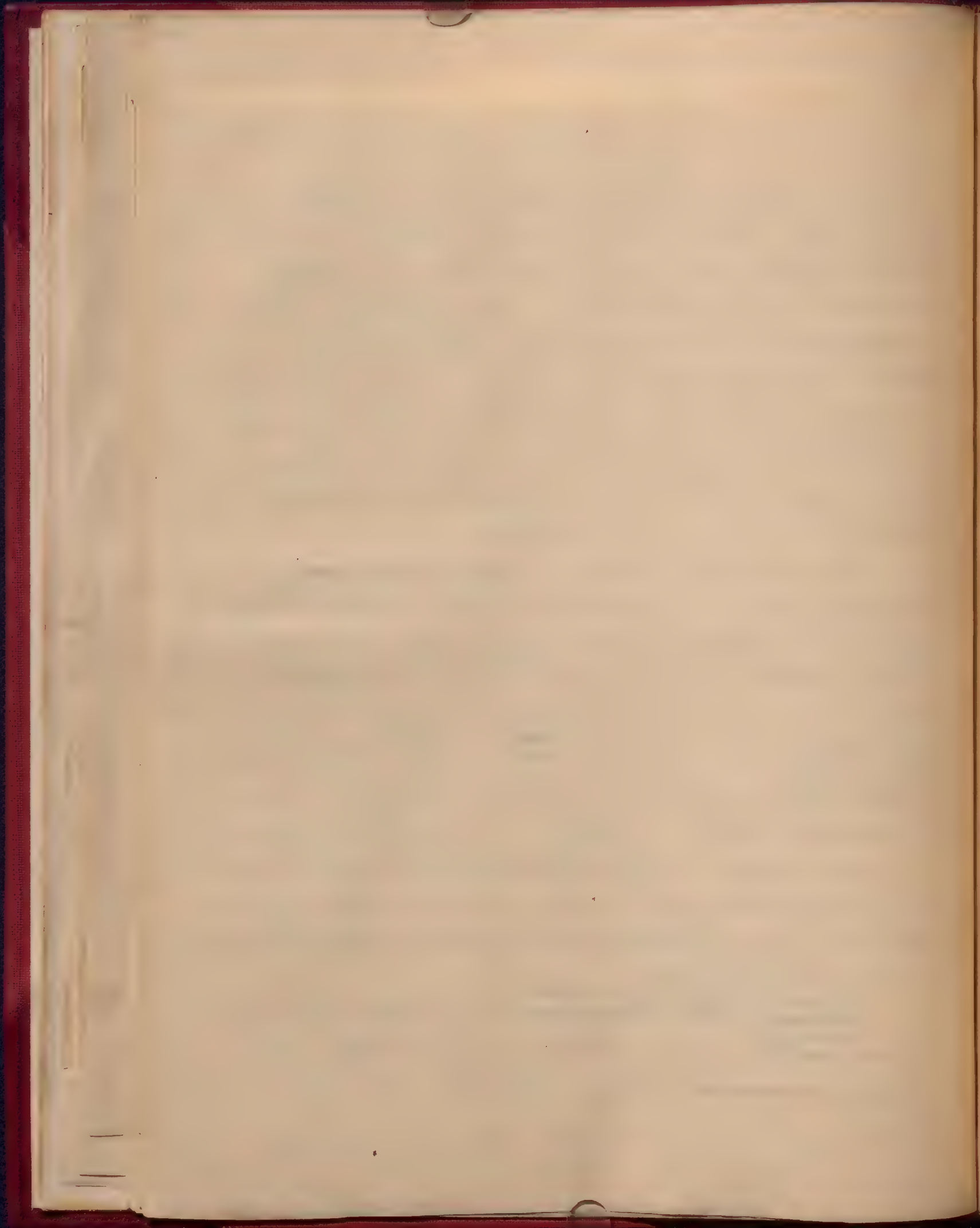
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of editions. A wave of enthusiasm swept over the profession, and for at least three generations the best energies of its best minds were devoted to the study of the writings of the Fathers. Galen became the idol of the schools. Always revered, though for centuries sharing a sovereignty with the Arabian Prince, Avicenna, he now was clothed with an authority, only a little less than divine. It is true the Arabians made a strong fight under the leadership of the Montpellier school, but it was a losing battle all along the line, and in the triumph of the Galenists scant justice was done to their adversaries.

One of the most interesting of these medical humanists, as they are called, is the distinguished Oxford physician, Linacre, one of the first teachers of Greek in England, whom indeed Fuller calls "the first restorer of learning in our nation." His editions of certain of the books of Galen were very popular, and he is still *remembered* as a learned grammarian, *while* *is* his memory cherished in the profession as *the* Founder of the Royal College of Physicians; and in both ~~of the~~ universities, in connection with the Linacre foundations.

In the revival of Greek ideals, the method of careful observation of the objective study of cases (a special characteristic of Hippocrates) was revived. ~~But~~ the scientific study of disease had to wait for another renaissance *and must later*

The richest harvest of a return
~~One great fruit that had turned to the direct object study~~
followed the
of nature, ~~was the~~ revival of interest in the ~~fundamental~~ subject of anatomy, ~~and this was the second great gift of this period to~~ medicine.

Lundinus



Mundinus, as we have seen, had in the 13th century revived the practice of dissection. For two centuries his ^{work} had furnished ^{the schools} with an anatomy ^{much more accurate than} ~~decidedly in advance of~~ that of the mediaeval ^{writers} ~~schools~~, ^{but} it was not up to Galen's standpoint, as anyone may see who cares to compare his description of the bones with that of Galen.

The practice of accurate careful dissection had fallen into abeyance, and though it was a custom in many schools to hold once or twice a year, what was called 'a public anatomy', yet as I have mentioned in connection with the studies of the University of Pavia, there seems to have been no provision in the middle ~~ages~~ of the 13th century for the teaching of anatomy. There remained the insuperable, and perhaps, for the period, not unnatural objection, to the use of human bodies for dissection.

As I will show you in one of the lantern slides, the usual practice was for ~~the~~ professor to sit in his chair, and explain ~~or comment on~~ the anatomy of Galen, while the barber-surgeon made a rough dissection. The anatomical writings of the great master were regarded as sacred, and if anything was found which did not conform, (the professor was not at all disconcerted, but apologised that the human form should have dared to undergo alterations since the days of Galen.

The revolution was affected by a young man from the Low Countries, Andreas Vesalius, a member of a distinguished medical family, who was devoted to dissections from his boyhood. The wonderful story

of

You



of his life and of his work, will be told you tomorrow evening by Professor MacAllister of Cambridge. It is sufficient here to say that he found the subject ~~of anatomy~~^a in chaos, and left it an orderly science, with a description of the structure of the human body not only amplified 1,000 times, but in every respect more accurate than that of the great Galen.

The shock to the medical world at the publication of the 'De Corporis Humani Fabrica' in 1543 is very similar to that which the most advanced types of higher criticism ^{Today} had given to the devout students of the bible, and it took at least a generation before they could agree to the possibility of error in Galen.

While Vesalius was destroying this anatomical sovereignty, a remarkable character in Switzerland and in Germany had thrown down the challenge to the whole medical system of the world. Around the history of Paracelsus, fancy has woven its magic web, so that it is by no means easy to get at the truth. He lived through nearly the first half of the 16th century. While some regard him as the Arch Quack and Humbug of all history, others give him the title 'Lutherus Medicorum', the great reformer. He had ^{with an} ~~the most~~ unbounded Charlataine like confidence in his own abilities, and he inaugurated his first public lecture by making a bonfire of the works of Galen and Avicenna. At a stroke he swept away all the theories of the ancients, and proclaimed himself to be the monarch, indeed the Christ, of medicine. "You follow me, you Avicenna, you Galen, you Rhazes, you Montegana, you Mesué; I do not follow you but you march in my suit.



You physicians of Paris, of Montpellier, of Sweden, of Cologne,
of the valleys of the Rhine, of the Danube, of the Isles of the
Seas, you Italian, Dalmatian, Athenian, Arabian, Hebrew physicians,
I do not follow you, but every one of you must follow me as the
dog does his master. I ~~shall~~^{will} be monarch, I ~~will~~^{shall} administer a
monarchy". For Hippocrates he had a lingering affection, but as
to Galen, he is a liar, and doubtless placed in the lowest hell,
whither his disciples will soon follow him. His own system was
a jumble of philosophy, Astrology and ~~alchemy~~^{as a} which ~~he tried to~~
savour ~~by adding~~^{he} a fourth, namely 'virtue ~~of~~^{the} physicians'.

What gives Paracelsus his special claim is the stimulus
which he gave to the study of chemistry. For the four humours he
substituted the three elements, salt, sulphur and mercury, which
in health were so co-mingled in the body as not to be distinguished.
When separate they caused sickness, complete separation was death.

Many distinguished chemists claim that he did not contribute
anything more to science than his teacher, that pious spagyrist,
Basil Valentine; and ~~antimony and mercury~~^{certainly}, the two drugs specially
associated with his name were ~~certainly~~ in use before ~~that~~ his day.
But with all his bombastic nonsense he ~~did a great deal of good in~~^{helped in the third great work of the}
~~leading a revolt against authority~~^{Renaissance - the}, ~~and he~~^{and he} turned men's minds to the
study of chemistry, ~~more than another century and a half had to~~^{Through}
pass before it entered ~~modern phase~~^{its}.

In spite of the great change ~~which had taken place~~, affected
by the renaissance, men still clung to the old Hippocratical views

of

connected



of the four humours, and the three spirits, natural, animal and vital, ^{and the} ~~the~~ conception of the working of the bodily machine had undergone little or no change. The ^{end} ~~close~~ of the 16th century still saw the dominance of the views of the great Pergamite, and in spite of all the ~~extraordinarily~~ good work which had been done in anatomy, what seems to us today so simple, the circulation of ~~the~~ the blood, was as little understood as in the days of Galen.

There were two closed systems, ^{the natural} ~~one~~ containing the ^o ~~veins~~ blood, which had its origin in the liver, from which, as from a fountain, the blood continuously ebbed and flowed for the nourishment of the body; ^{the other containing another} ~~and the other the vital blood, containing~~ the vital spirits, ~~which~~ ebbed and flowed from the heart, distributing heat and life to all parts. Like a bellows the lungs fanned and cooled this vital blood. Here and there ^{found} ~~there~~ were glimmering conceptions of a communication between these systems, but ^{and as I will tell you tomorrow, Servetus knew the} ~~nearly~~ ^{circulation} ~~all~~ ^{of these things} ~~thought~~ ^{teachers believed that} the only one which existed was by means of small pores ^{in the lung} in the wall, separating the two sides of the heart.

Observation, merely looking at and thinking of things, had done all that was possible, and further progress had to await the introduction of a new element, namely experiment. It is true that Galen had made many experiments, with one of the most memorable ^{of which} he had shown that the arteries of the body contained blood not air. But the day had come when men were no longer to rest content with accurate description, and with finely spun theories and dreams, and it was reserved for the immortal Harvey, whose name is ~~ever~~



connected with Oxford, as for a time Warden of Merton College, it remained for him to put into practice the experimental methods with which he demonstrated conclusively that the blood moved in a circle. The little book "*De motu cordis*" marks the final break of the modern spirit with the old traditions. It took a long time before men realized the value of this '*Inventum mirabile*', sought for so earnestly by Descartes. Indeed they have only done so within the past century.

With a glorious beginning at a glorious period in the world's history, the profession of medicine retains the noble *attributes* ~~characteristics~~ which I told you inspired our Greek fathers. But not the keen vision of Hippocrates, as he discussed with Plato the oneness with nature, and the naturalness of all disease, not the philosophic insight of Galen at its brightest moment, stimulated by converse with his friend Marcus Aurelius, not the mystic yearning of the Persian physician *and* poet Avicenna *amid* ~~and~~ his guests, "Star seated on the grass", could have given to these men the faintest conception of the possibility of *such progress* ~~their art~~, such as the Victorian era has witnessed.

Great as have been our achievements in Literature, yet greater in the physical sciences, and greater still in social and political reform, they are as nothing in respect to ~~these~~ gifts which modern medicine has given to suffering humanity: -- the *conquest* ~~abolition~~ of pain, Listerian surgery, and the control of infectious diseases. And the end is not yet, but the present is a worthy outcome of the beginnings of which we have taken this brief and hurried glance.



"
Life in the Tropics
Lecture I"

[not published. First ten leaves consecutive, followed
by another three also consecutive. In the University
[Oxford] Gazette 1912 "From the Annual Report of the Curators
of the Indian Institute¹⁹¹¹" is taken the following extract

"In the Summer Term the Regius Prof. of Medicine
gave a course of four lectures for the benefit of the
Indian Service probationers and of the Forestry
Students on 'Life in the Tropics for Europeans';

1) General rules of health;

2) Malaria;

3) Plague and cholera;

4) Dysentery and the less common diseases,
Parasites, Snake bite etc."



LIFE IN THE TROPICS

Lecture 1.

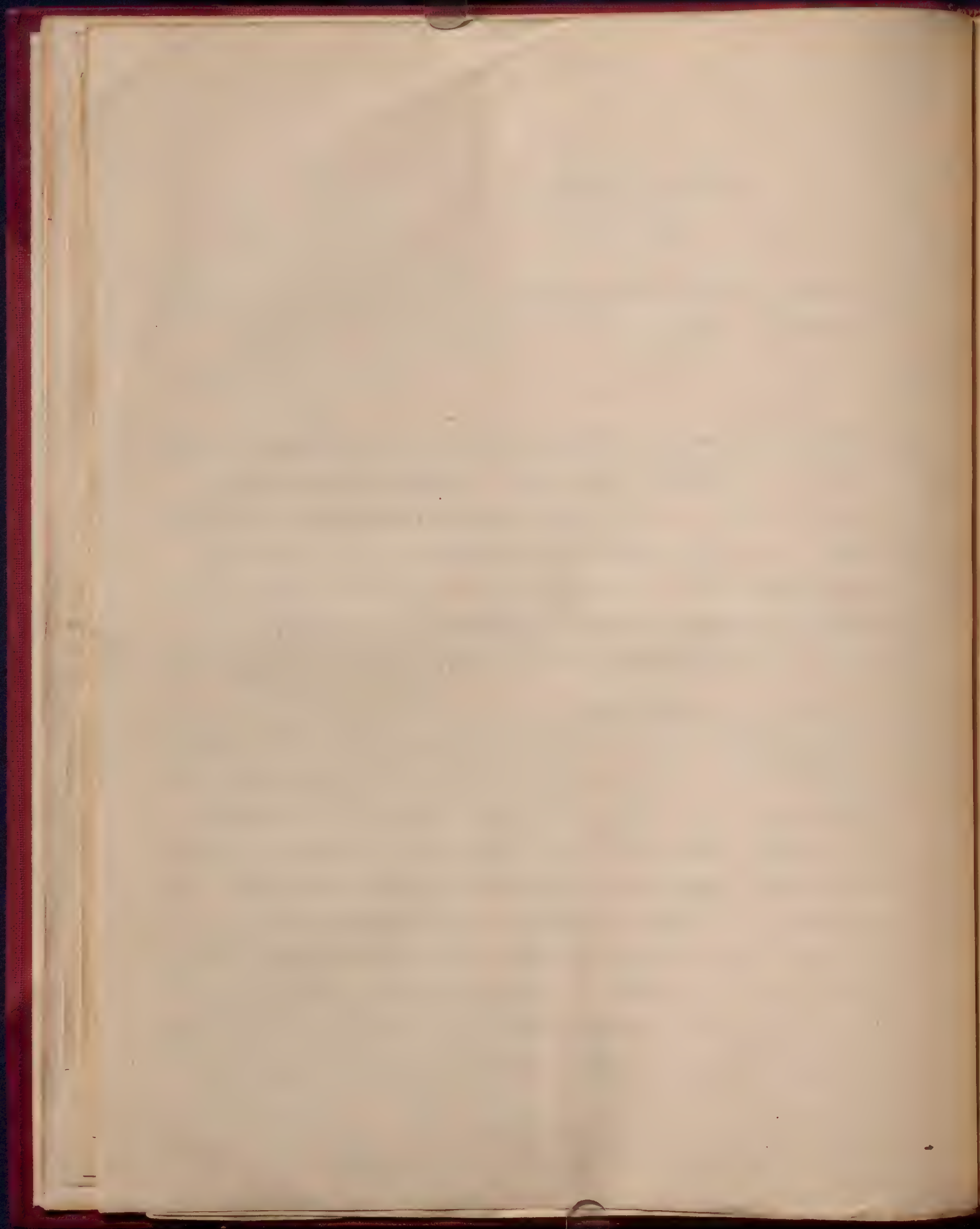
I. Personal -- Scope of the lectures. The importance of tropical diseases - *Conquest of the Indian by the white man.*

II. Definition of health -- "A natural order and government of one by another of the parts of the body". Anything at variance with this is disease. And a balance should be maintained between the mind and the body, which should be equally exercised to protect against lack of *harmony*. This was Plato's conception of health, and represents the *Greek* ideal of the sound mind in the sound body.

Health from a dual stand-point, the individual and the community. *The former today.*

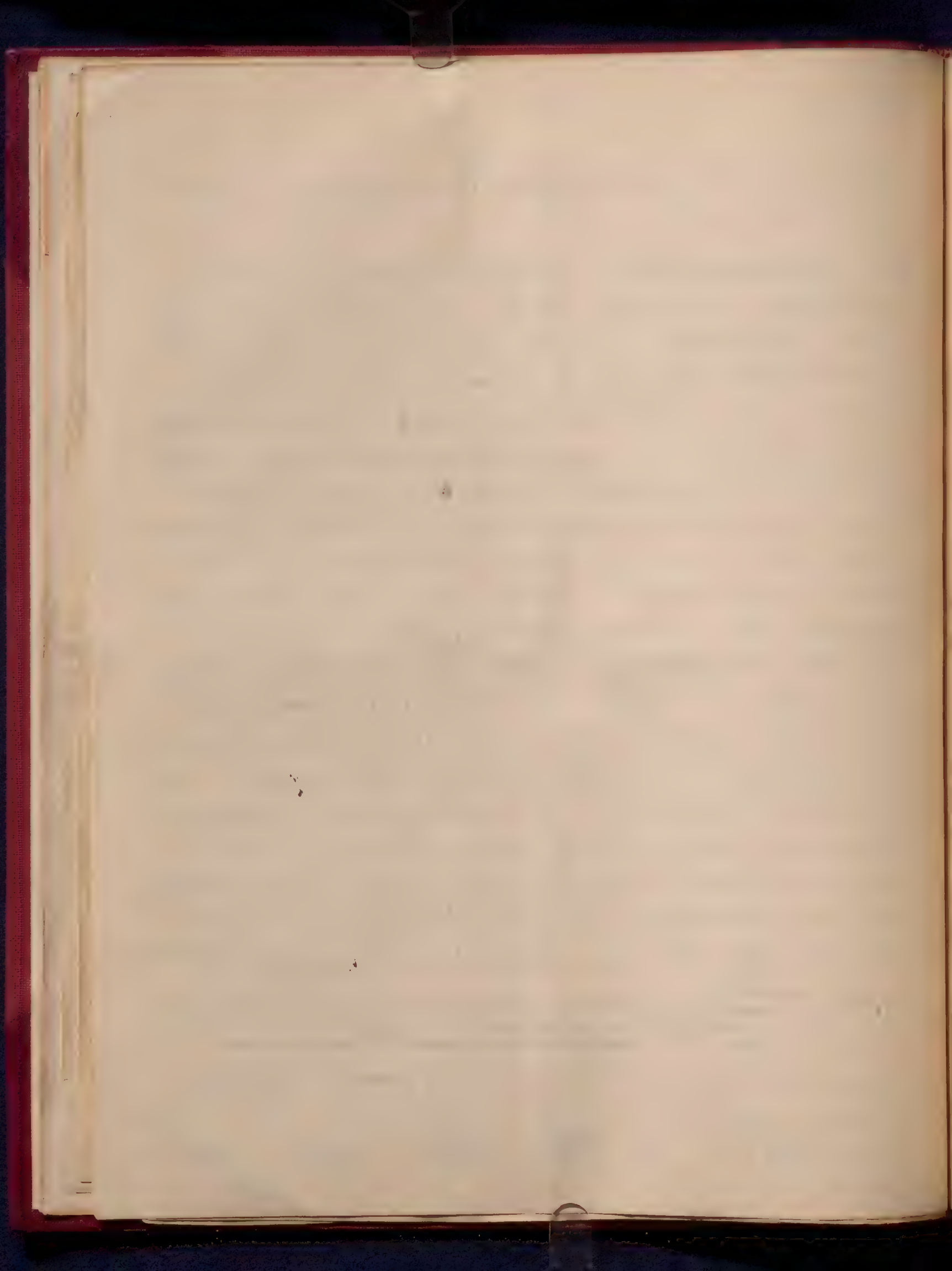
Go out with a light heart.

III. Men's resisting power. No other animal so adaptable. He is the most tenacious, enduring and ferocious creature upon which the sun shines, and, as an animal, he has never been in better condition than today. As a recent writer reminds us : -- "We are descendants of the victors, the survivors of countless generations. We have been in the habit of meeting difficulties and overcoming them for eons. Are we likely to forget these proud triumphs and weakly succumb now ? If there is, by any possibility, anything which can come upon us in the way of heat, or cold, or hunger, or wounds, or disease, which our ancestors have not met and conquered, it would be hard to imagine it. Remember then, we represent the dominant strains of millions of generations, and that it is the breath of our nostrils to meet dangers and overcome them. It



It took nature some thirteen millions ^{of years} to make us, and she is not given to wasting her time".

IV. The body as a machine. The body is a wonderful machine, a living motor. Many motors, many men. All sorts and conditions of both. 5-10 H.power, 10-14, 14-20, , 30, 40, 60, 80 h.power. Many types of construction, Daimlers, Rollos, Royce, Napiers, Renaults, Humbers. Take a dozen of 1911 Napiers turned out of the same shops, on the same pattern, with the same parts, and of the same horse power, and driven with the same make of petrol, Not all will last the same time, not all will wear as well; one will run 20 miles to the gallon, another only 16. One is in the shops every few months, the other is as good as new at the end of the year. And it is not a matter of the chauffeur alone, in the way the machine is driven, or the care which is taken, there are curious differences ^{in spite of} the similarity, indeed ⁱⁿ the identity of the machines. And the same is true of men. Take the group of 1911 Indian Civil men -- the same frame, the same works, the same training, and yet how different when put into commission! The parts stand the wear and tear very unequally, or the driver puts too much strain, forcing the machine, which breaks down at the end of a few years by accident or misuse, when with careful handling it should have been good for five or six decades. ^{not all parts are equally well constructed none of us are built like} You remember the Deacon's "One Ross Gray" built in such a logical way as to run 100 years to a day. ^{are not so built - There is a weak spot somewhere in tubing, in pump, in bellows or in valves.} As ^{Good} a motor, ^{well driven} so a man at work has three good points -- noiseless, smokeless, ^{it is} dustless. ^{it is} All the parts of a well constructed car ^{work} smoothly, without jar or jostle, neither the throb of the engines, nor the revolution of the wheels makes a noise perceptible to the occupants. So in a ^{well concluded} good bit of human machinery, the throb of the heart engines,



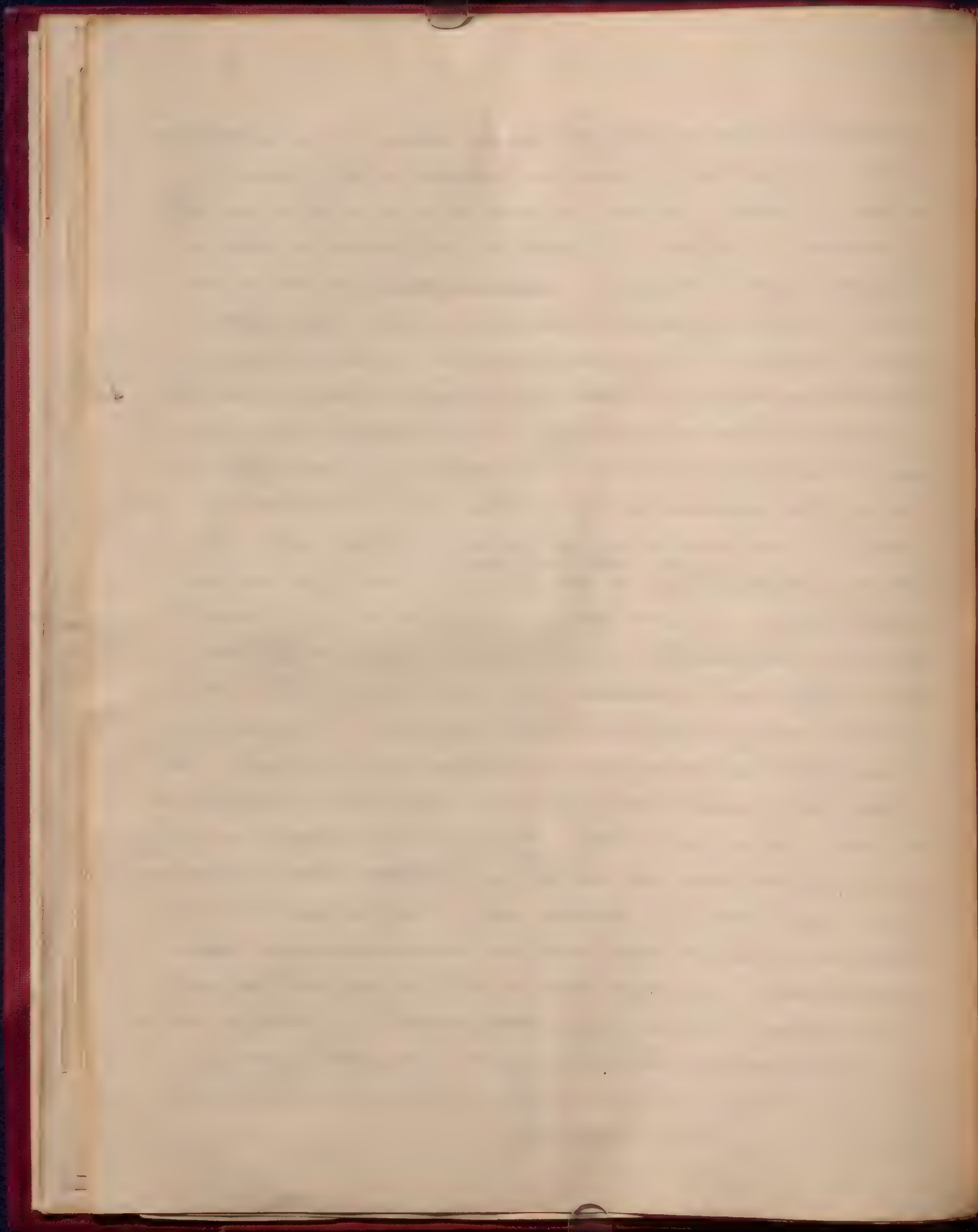
60.80 times a minute is not noticed, the bellows fan silently the myriads of little fires which keep alive the heat of life, the furnaces transform the food fuel into the finest shell-petrol, which is distributed to every part so gently, ~~so~~ softly that we never hear the ~~noise~~ ^{of the ~~fire~~ ~~current~~}, while the ashes are got rid of by the skin, kidneys & bowels in the same silent way. And ~~as~~ a good motor is smokeless, with a combustion so perfect that no mephitic vapours escape, no trail of ill-smelling smoke pollutes the air as it passes. So The human machine, ^{100 when} in good running order, consumes its own smoke, and expends its energies ^{keeping fit and} in work ~~alone~~. And to continue the parallel, as a ^{self-respecting} ~~well-run~~ motor ^{is} ~~should be~~ driven dustlessly, neither ruining the country-side by careless indifference, nor blinding the passers in clouds, so the human machine should run its course with the least possible inconvenience to ^{Do not bother your neighbors with your small troubles but learn to consume, even your own waste in helping others.} In an engine the fuel is the source of energy; the burning coal heats the water in the boiler until its molecules can no longer remain in a state of close aggregation, their increased amplitude of movement, the expansion, gives the thrust, ¹⁰ and the piston and the wheels are moved. All the fuel is not burnt, some goes off as smoke, and much remains as ash. The food we eat is the fuel, and it is burnt up in the furnaces of the body, the draught for which is the air taken by the lungs, setting free the heat which keeps us at a temperature of 98; ^{and supplying} ~~which gives us~~ the energy ^{to} use our muscles and brains. Some of the food remains, like the ash of the coal, as faeces, and the various parts of the human engine are automatically cleaned, and the dust and dirt are thrown off in the urine, the breath, and by the skin.

Different engines require different sorts of fuel, - coal, gas, petrol. Man's engines, to work well, need three different kinds of fuel, which represent the three great classes of foods, the proteids

or



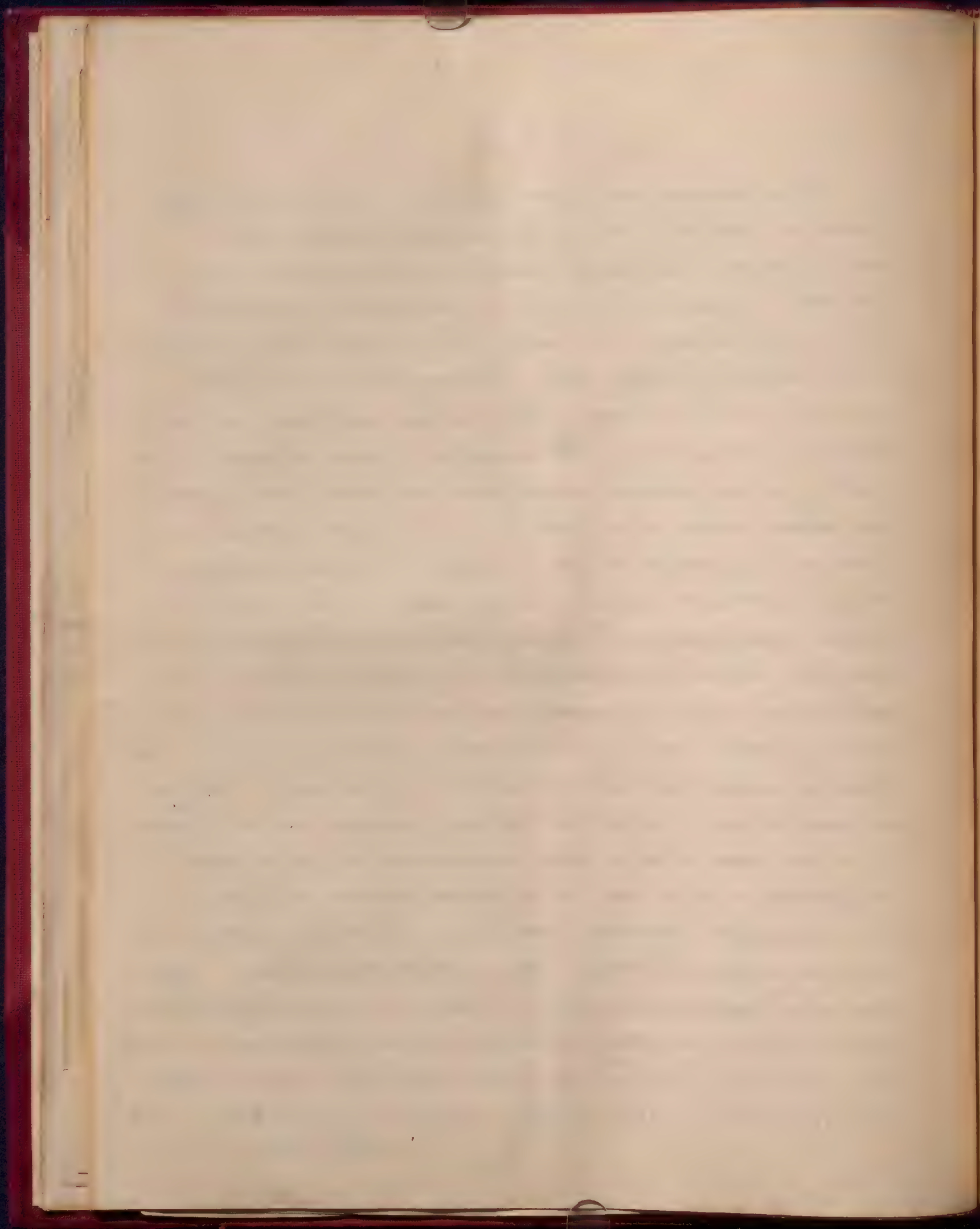
or meats, the carbo-hydrates, starches and sugars, and the hydrocarbons or fats. We know just how much fuel is needed to run a man-motor, weighing ten stone. The heat (or force) value of a food is estimated ^{in what are called} in calories -- a calorie is the amount of heat required to raise one kilogram of water 1° centigrade. ~~That is to say~~ if you burn up one gramme of proteid, enough heat is set free to raise 4.100 grammes of water 1° centigrade. Of the three varieties of food the proteids & carbohydrates have about an equal force ~~producing~~ ^{reproducing} power, but the hydro-carbons or fat, are of double value. The stoker puts in the rough coal, or the chauffeur fills the petrol tank, and it would be a great comfort if we could have our fuel in crude form -- ^{the} 155 grammes of proteid, 80 grammes of fat, and 500 grammes of carbo-hydrate, giving the necessary 3500 calories ^{with which to run the engine of a working man}. We have peculiar furnaces which burn only prepared fuels; we prepare ours by cooking, and variety is found ^{to be} essential. Extraordinary adaptability man enjoys in the ^{matters} ~~the~~ question of diet. Health may be maintained, and work done on proteids ^{alone} -- meats -- alone, or, as do the Esquimaux, on meat and blubber. Millions of our Indian fellow subjects eat only rice and fruit, and drink milk. ^{Man may live on milk alone, see p.} The rickshaw men of Japan do hard work on rice alone, and a little fish on off days. Little fat is eaten. Proteids are very peculiar as a fuel man can get along with less than ^{(one third) 155 grammes} half of ~~the amount~~ stated, but the more active races crave a full quantity; they are more attractive to the palate, and the machine works better when there is more proteid than it strictly needs. The surplus seems to help lubricate the finer parts of the machine. The meat eating races dominate ^{the world}. You remember the old line "Pudding and beef make Briton fight". The mystery is how the furnaces stand the motley mass of fuel which we shovel in every day. But to the point I will return.



V. The characteristics of the Tropics. The ~~Climates~~ are broadly classified into marine, continental, or mountain, with the sub-divisions of desert, littoral, and monsoon. In India the characteristic monsoon climate, with the three seasons of cold during the winter monsoon; hot in the transition season, and wet in the summer monsoon. Let me read you a ^{descriptive} paragraph from that great authority on India and Indian life, the late Sir Joseph Fayer



"This extensive but compact country has a teeming population composed of races more numerous and ethnically distinct, and speaking languages numerically greater and more varied than those of Europe; whilst, from the nature of its physical geography and the extent of its area, it has every kind of climate, from the torrid to the temperate and arctic zone. The seat of the most ancient civilization, with a history reaching far back into remote antiquity; possessing a fertile soil, lofty mountains, elevated table-lands, rich alluvial valleys, extensive desert-tracts and plains, noble rivers, vast swamps, jungles, magnificent primeval and modern forests; a rich fauna and flora, wealth of mineral, vegetable, and animal products, and many undeveloped resources, it has characters that invest it with peculiar interest, especially for those who spend the best part of life there, and on whom the responsibility of ruling has fallen. A country with such physical endowments has many distinguishing features that are strange to the Anglo-Saxon, who has necessarily much to learn before he becomes reconciled and adapted to his new home. The people and their habits, the animal and vegetable creation, even the diseases differ from those he has hitherto known or heard of, and he makes acquaintance -- let us hope, not in his own person -- with malarial and liver disease, insolation, heat apoplexy, dysentery, guinea, worm and other filarial affections, & some maladies such as dengue & cholera, which sweep over the country as disabling or destructive epidemics; whilst the conditions of life generally under which he moves and exists are dissimilar to those that he has been accustomed to in the temperate latitude of his birth, boyhood, and youth." (Malcolm Morris, Book of Health, p.914.)



Man must accept ^{as} the climate as he finds it, ^{as} he has very little power to modify it. For Europeans the trying feature is the enervating influence of the prolonged heat. The white man has not the protecting influence of the dark skin. My friend Dr. Woodruff of the U.S. Army, has recently brought forward the view that the excessive sun-light has a directly injurious effect, ^{on the white man} and is responsible for the lethargy and disinclination to work, which so many feel, and also, he thinks, for the tendency which is often seen, to become neurasthenic. In the Tropics the natives have not the same stimulus that keeps the Northern people at work. "The prodigality of the Tropics removes all stimulus to effort." A few weeks work will provide a Malay with as much sago as he can eat in a year, and as Captain Cook states the South Sea Islander who plants ten bread-fruit trees does as much towards providing for his family as a European who works for a year. As Guyot puts it : -- "He never dreams of resisting the all powerful physical nature, he is conquered by her and submits to her yoke." There is much in what Rabbi Ben Ezra says : --

Then welcome each rebuff

That turns earth's smoothness rough.

Each thing that God has put out nor claud, but go

Yet civilization began in the Tropics, at any rate in the subtropical districts of the Mediterranean.

any one who will be content with a hard life

VI. Who should go to the Tropics? The spare, dark man with active frame seems to stand the life best. The fair, ruddy, muscular, full blooded man, with big chest, and strong furnaces, is apt to take liberties, stokes his engines too freely, and drives them too hard, and so runs greater risk. Both of these types I see before me, and from both have been furnished the most successful of Tropical administrators



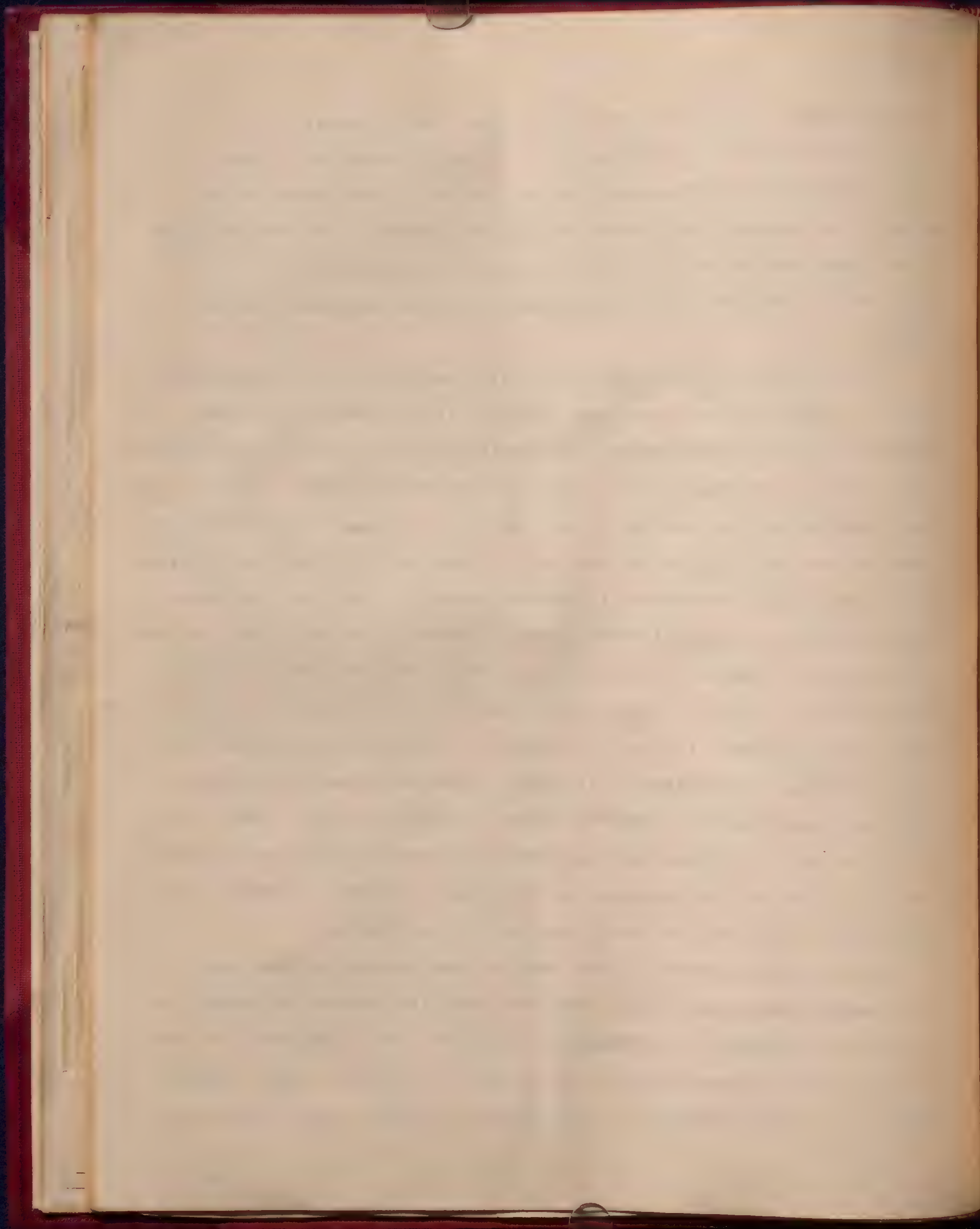
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administrators. The fat, flabby ^{Holly} man should stay at home.

On the question of clothing, food, drink and exercise, I have asked Surgeon General Bradshaw, who was for 40 or more years in India to say a few words. And Lieutenant Colonel Dimmock, the late Principal of the Grant Medical College, who has just returned from 30 years in India, will also give you his experience, and will supplement my few remarks.

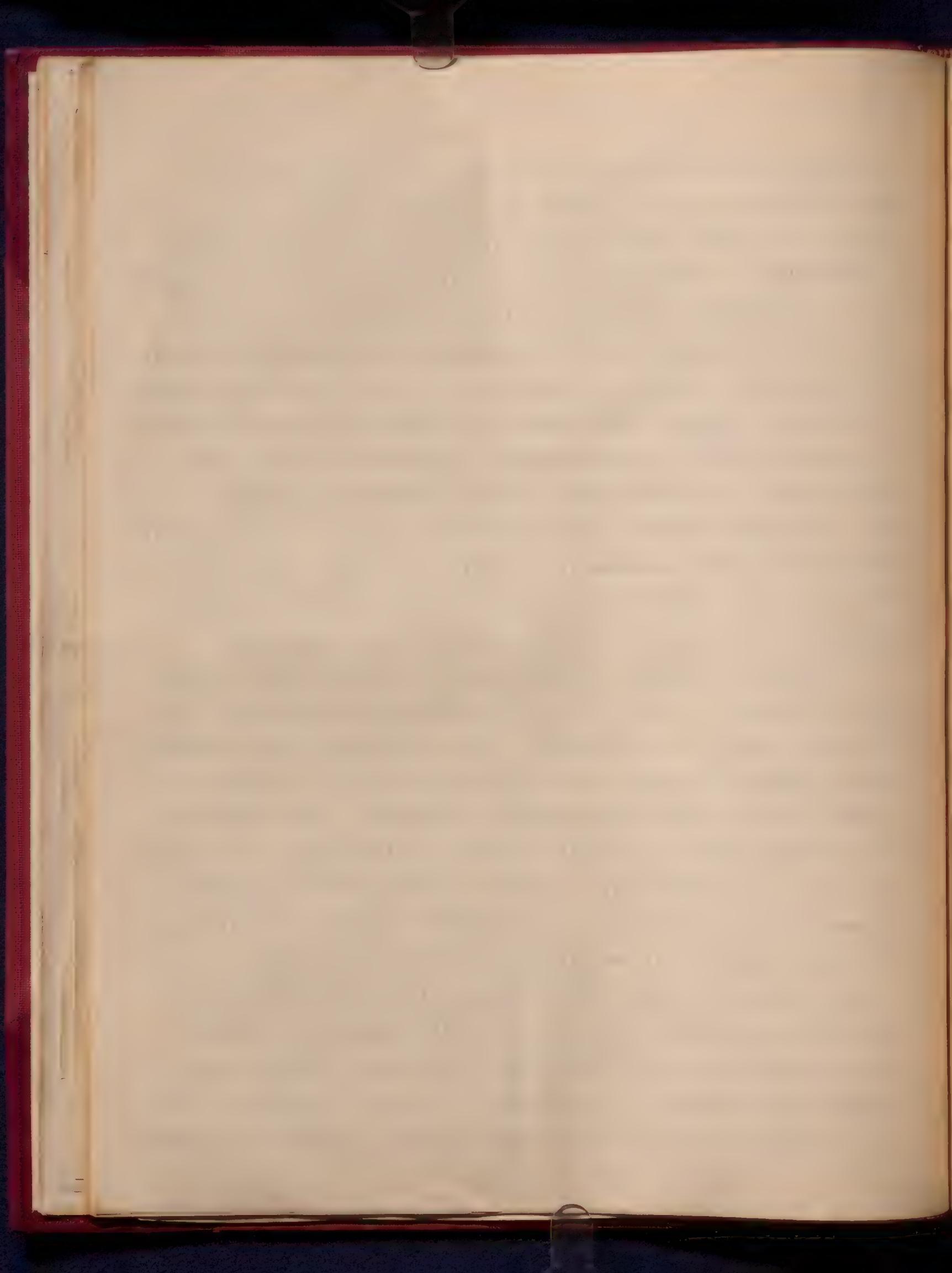
It is generally agreed that the best clothing for the Tropics are light in colour, loose in texture, and thin in substance. The cool evenings, and the rapid changes in temperature often require thin flannels. A good rule is to keep the head cool, and the abdomen warm. Perhaps the most important of all relates to the question of food. The great difference between the diet of the natives in India and other tropical regions is the very large proportion of carbo-hydrates. I was told the other evening a story of one of the West Coast Africans, I think it was, who was in the habit of taking one meal a day. When asked whether he had had his dinner he replied ; -- 'Cannot you not see that I have '. His one meal a day consisted of about 20 bananas. In many countries the people are practically vegetarians. In Egypt the Fellahs keep themselves in very good condition with cereals, beans, onions, and milk. Very little meat is eaten. In Japan too, the proteid contents of the food is very much below that of the European, but they have increased it very much of late, and in the army, it is stated, with great benefit.

Many of you, I daresay, have heard of the studies of Professor Chittenden of Yale, who claims that the recognized amount of proteid in the food of Europeans and Americans is altogether too high, and the best of conditions and the maximum of work, may be obtained by more than 50% below the ordinary standard. The question is still under discussion.



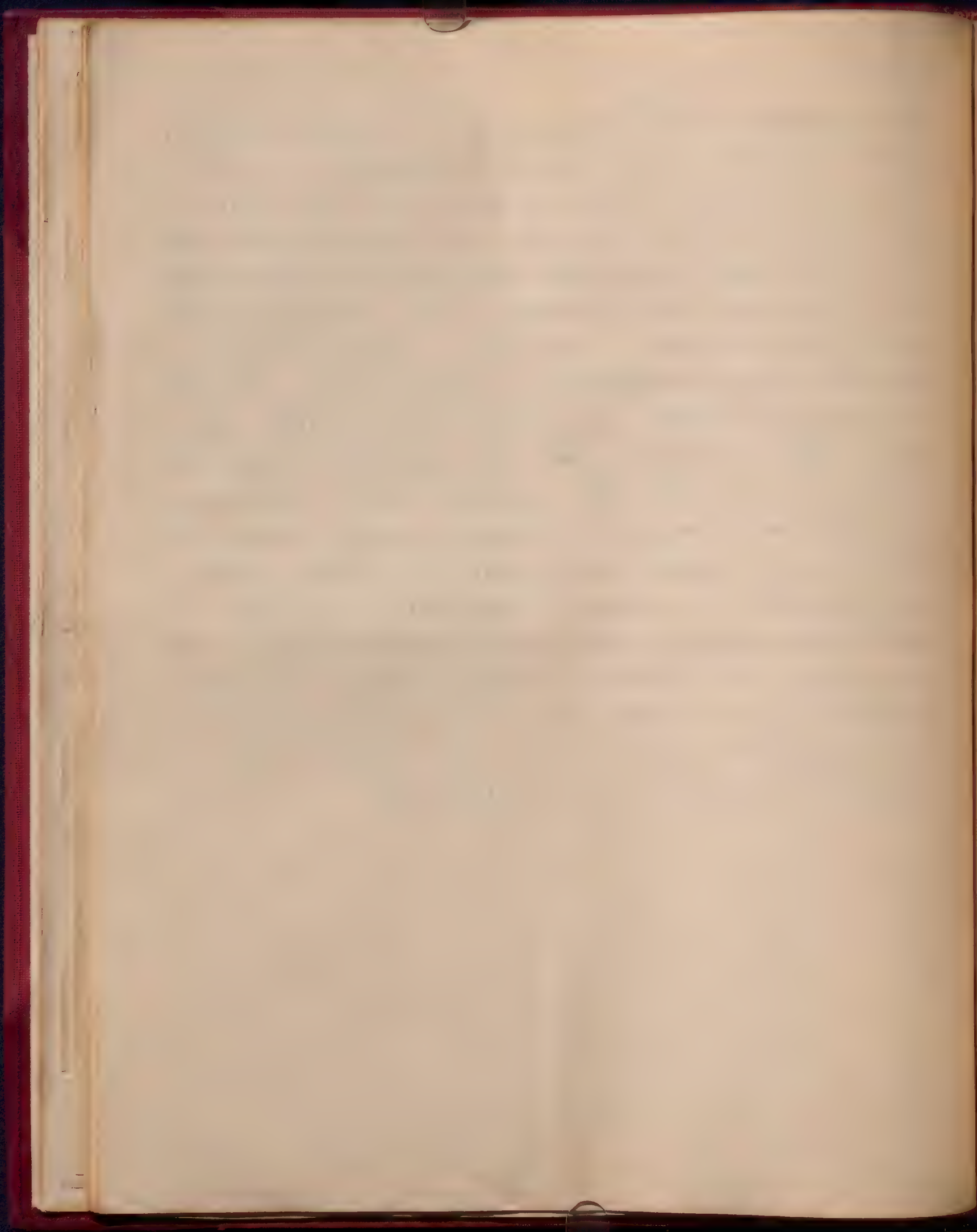
An important contribution to it has recently been made by Professor McCay of Calcutta, who has studied the dietetic conditions of the Bengali, the limit of whose nitrogen intake is less than 40 grms of protein daily. The Bengali is a vegetarian by force of circumstances, he eats extraordinary quantities of rice and dal, ^{but} not more than one third of the nitrogenous food of the European. A group of the Bengali and Anglo-Indian students were studied at one of the residential colleges in Calcutta. The diet was arranged for the Bengalis - 67 grms of protein, 9+ of which are from the animal sources; carbohydrates 548+ grms; fat 71+ grms. The Anglo-Indian students, ^{had} protein 94+ grms, 38+ of which were from animal sources; carbohydrates 467; fat 56. In the Bengalis there was an average increase in body weight of 2 lbs; in the Anglo-Indians 14 lbs. Of the Bengalis only 15% gained weight continuously, whereas all the Anglo-Indian students gained weight continuously.

In physical endurance, capabilities of performing work, in resistance of disease, in the existence of kidney disease, the Bengalis are very much inferior to the Europeans. The other Indian races, the Sikhs, Rajputs, Pathans and Baluchis, are all meat eaters, and it is from these sources that the Indian army is chiefly recruited. McCay states that the vegetable races are gradually undergoing ~~elimination~~ as recruiting sources for the Indian army. Surgeon General Bradshaw and Colonel Dimmock will give you advice on the question of alcohol and exercise. But I may mention one or two points with reference to drinking. It is a great mistake to suppose that the human motor needs alcohol in any form to get the best work possible out of the machinery. The best possible work can be done without beer or spirits, and there is an extraordinary consensus of opinion that the less one consumes of these in the Tropics the better is the general health. Brandy and soda used



Europeans

formerly ~~to~~ kill as many ^{as} typhoid, malaria and cholera put together. So that, while there is no necessity to be teetotallers, you should get into the habit ~~of~~ not drinking spirits or beer, and ^{as} it is all a matter of habit, and the one is almost as easy to acquire as the other. Briefly I should say from my personal experience in the Southern States the important thing in the hot weather is, first, to avoid over indulgence; ^{2nd} lessen the amount of animal food. In India, certain meat, such as beef and pork, require to be very thoroughly cooked, on account of the danger of parasites. Fish should be eaten very fresh, and well cooked. ^{3rdly} Avoid all articles of food that cause looseness of the bowels. See that fruit is ripe and sound. Great care should be taken that any vegetables eaten raw should be thoroughly scoured with hot water. Milk should be boiled, and water should be boiled and filtered. Several of the most serious of the diseases are communicable through water. And lastly a good rule is not to take too much thought as to what you shall eat or drink, or even wherewithal you shall be clothed. It is easy to become nipped, or a valetudinarian. You know the old saying that "a healthy man does not know that he has such a thing as a stomach, a dyspeptic does not know that he has anything else."



Climate in India What has been called the monsoon climate, with three seasons -- the cold during the winter monsoon; the hot in the transition season, and the wet one in the summer monsoon

Broad classification into marine, continental, and mountain, with sub-divisions of desert, littoral and monsoon. This is the most convenient. Of Herbertson's natural regions, the 4th is the one that chiefly concerns us, comprising the Sahara type, the West Tropical deserts, the mountain type, the East Tropical lands, and the inter-tropical table-lands.

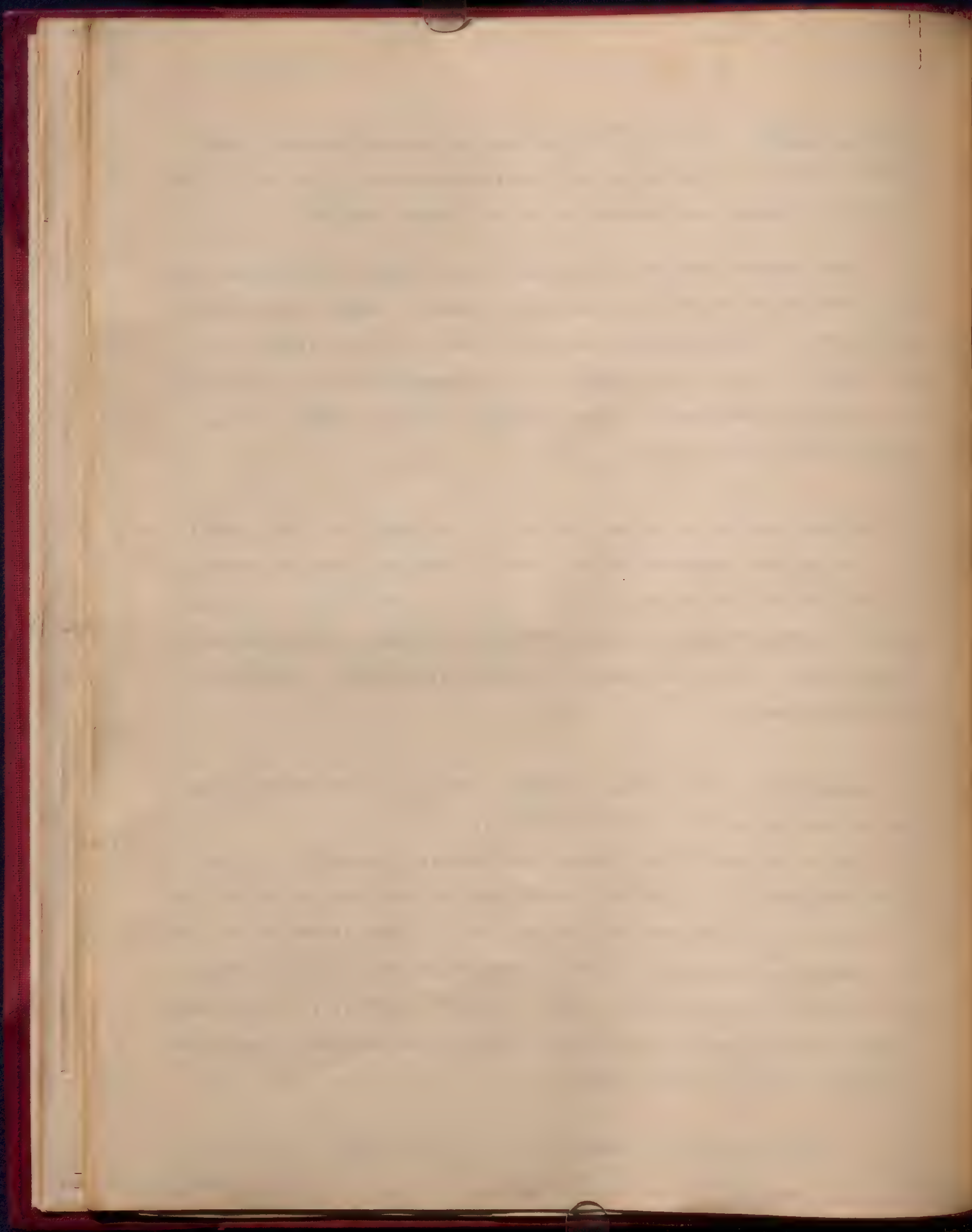
We must accept the climate as it is, can modify it but slightly.

The sun the dominant factor. Still discussed whether the dark skin of the tropical races is due to the sun, undoubtedly an advantage. Woodruff's view that the excessive sunlight of the Tropics injures the white man, and that he becomes disinclined to work, and gets neurasthenic.

Climate only one of many factors. No regions uninhabitable except the extreme arctic, and the great Sahara.

The prodigality of the Tropics removes all stimulus to effort. A few weeks work will provide a Malay with as much sago as he can eat in a year, and as Captain Cook states the South Sea Islander who plants ten bread-fruit trees does as much towards providing for his family as a European who works for a year. As Guyot puts it : -- "He never dreams of resisting the all powerful physical nature, he is conquered by her and submits to her yoke".

Civilization seems to have begun in the Tropics, at any rate in the



the sub-tropical districts of the Mediterranean basin.

Clothing light in colour, loose in texture, and thin in substance.

Keep the head cool and the abdomen warm is a good rule. Cool evenings, and rapid changes in temperature often require thin flannels

Food in the Tropics. Extraordinary difference in the dietary, mainly in two points, the great increase in the carbo-hydrates, including the vegetable cereals and fruits, and the marked difference in the nitrogenous or proteid articles, such as meat.

Food of the Fellahs

Food of the Japs

Food of the Bengalis

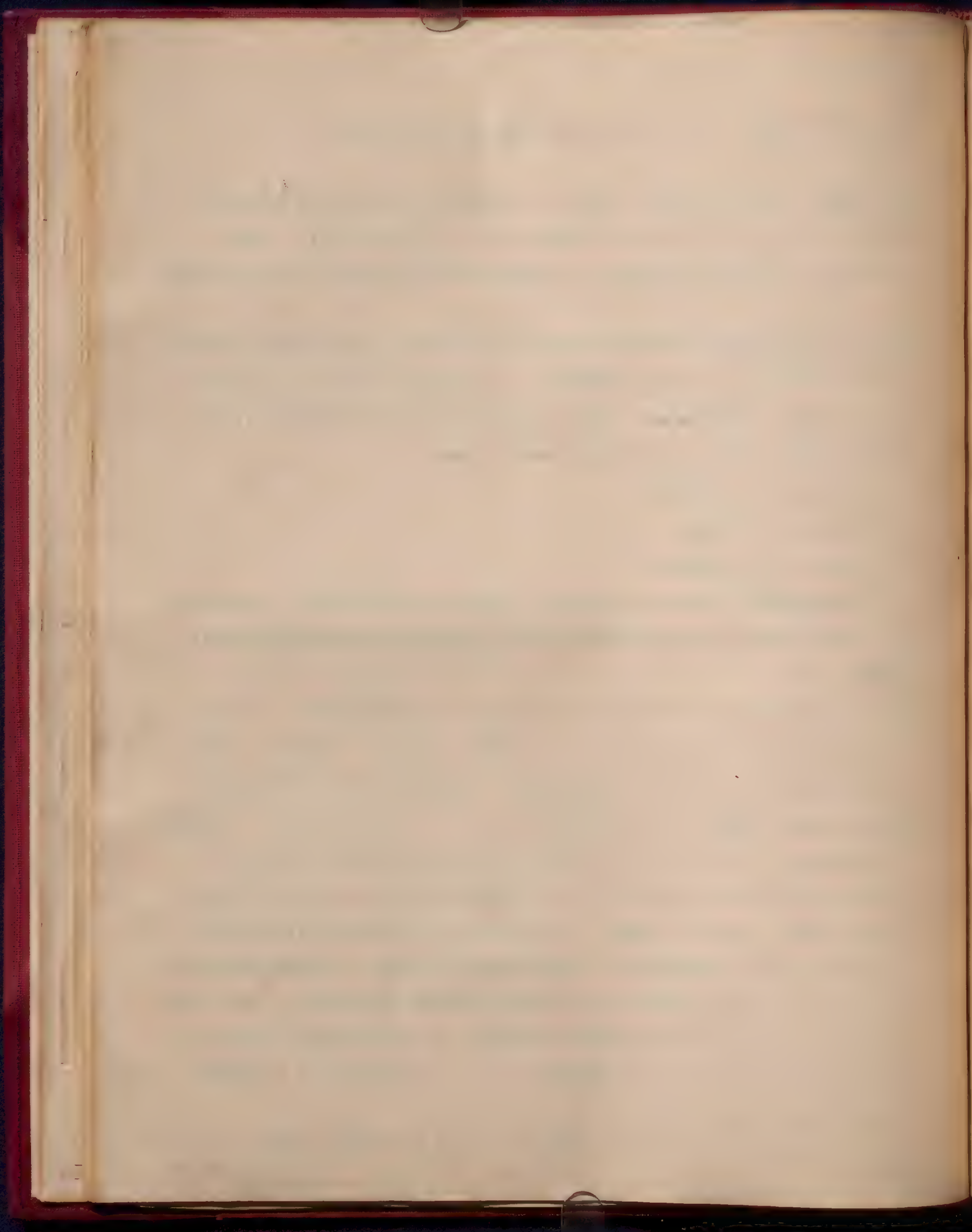
Remarkable studies by McCay, Professor of Physiology in Calcutta

Low limit of nitrogenous intake, less than 40 grms of protein daily.

The Bengali a vegetarian by force of circumstances; he eats extraordinary quantities of rice and dal, not more than one third of the nitrogenous food of the European. A group of the Bengali and Anglo-Indian students were studied at one of the residential colleges in Calcutta. The diet was arranged for the Bengalis 67 grms of protein, 9+ of which are from the animal sources; carbo-hydrates 548 + grms; fat 71+ grms. The Anglo Indian students, protein 94+grms, 38+ of which were from animal sources; carbo-hydrates 467; fat 56. In the Bengalis there was an average increase in body weight of 2 lbs; in the Anglo-Indians 14 lbs. Of the Bengalis only 15% gained weight continuously, whereas all the Anglo-Indian students gained weight continuously.

In physical endurance, capabilities of performing work, in resist

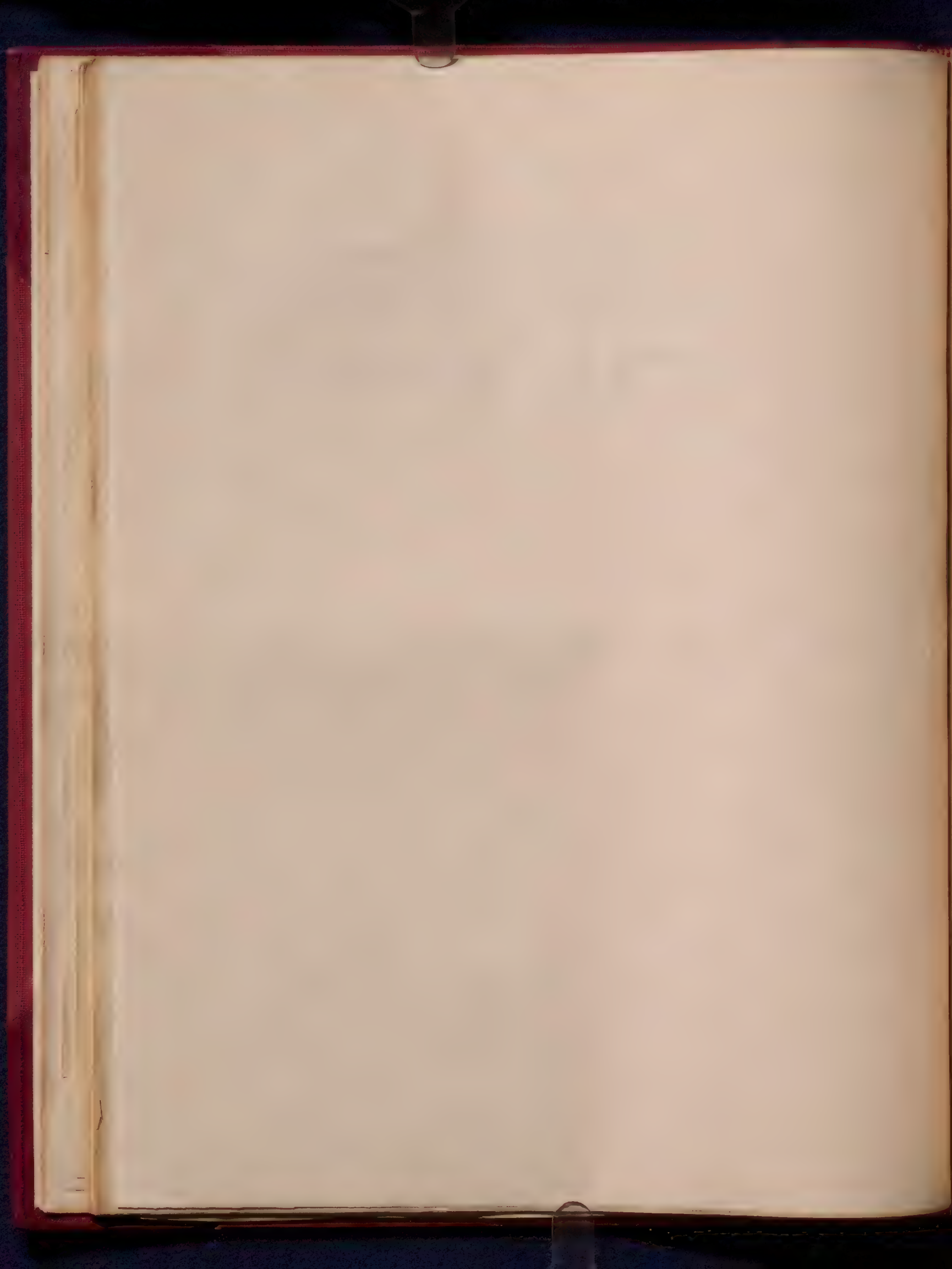
-ance



resistance of disease, in the existance of kidney disease, the Bengali are veru much inferior to the Europeans. The other Indian races, the Sikhs, Rajput, Pathan and Baluchi, are all meat eaters, and it is from these sources that the Indian Army is chiefly recruited McCay states that the vegetable races are gradually undergoing illimination as recruiting sources for the Indian Army.



"The Lessons of Greek Medicine
A lecture to the class of the Regius Professor
of Greek, Oxford. May 27th 1910"
endorsed "Forecast of Mod Medicine" — in
Sir William's hand.



THE LESSONS OF GREEK MEDICINE.

A lecture to the class of the Regius Professor

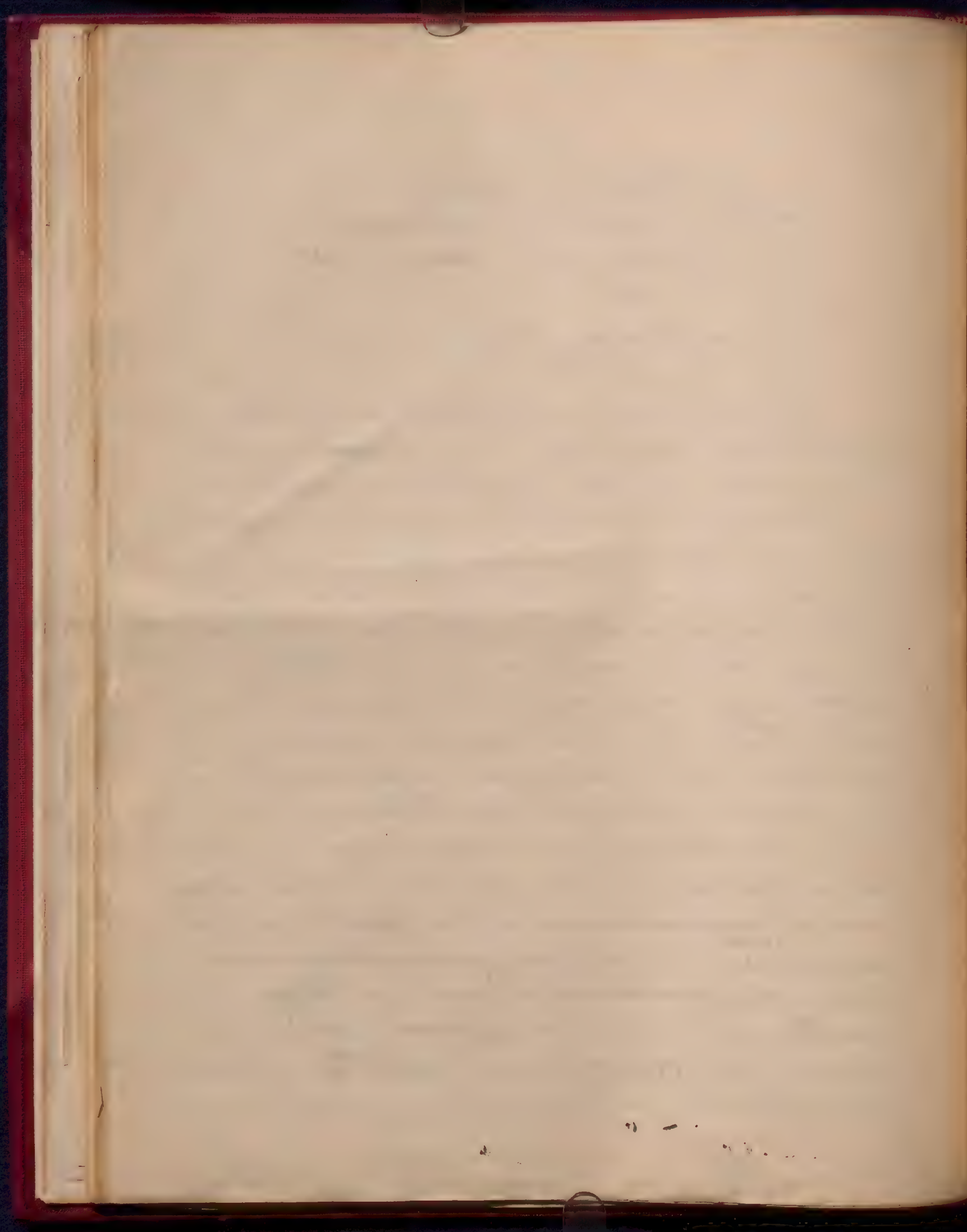
of Greek, Oxford. *May 27th 1900*

by

WILLIAM OSLER M.D. F.R.S.

The tap root of western civilization sinks deep in Greek soil, the astounding fertility of which is one of the ~~great~~ outstanding facts of history. As Sir Henry Maine says "To one small people ... it was given to create the principle of progress. That people ~~is~~ the Greek." Except the blind forces of Nature nothing moves in this world which is not Greek in its origin." In our art, literature, philosophy and science the controlling principles, though not always recognized, are Hellenic. But on this point, ^{before} ~~to~~ this audience ~~and in this place~~ I need not dwell. Oxford still thinks in certain levels only ^{with} ~~by~~ the help of Plato, and echoes of the Lyceum are to be heard in every one of her lecture rooms. In ~~the~~ introductory chapter of his 'Rise of the Greek Epic' Professor ^hdwells on the keen desire of the Greeks to make life a better thing than it is, to benefit ~~the common life~~, and to help in the service of man. ~~The glory of this zeal for the enrichment of life was revealed to the Greeks~~ ^{people} ~~as to no other, but the fulfillment in a still important respect is only now taking place.~~ ^a ~~The~~ ^{inst-} ~~thought~~ ^{like} pervades Greek ~~life~~ ^{life} ~~like an~~ ^{the} aroma. ~~Price~~ ⁱⁿ the body as a whole, ~~there is~~ ^{but} ~~one~~ ^{the} refrain from Homer to Lucian, "For pleasant is this flesh", and the strong conviction that 'our souls in its rose flesh' is quite as much helped

by



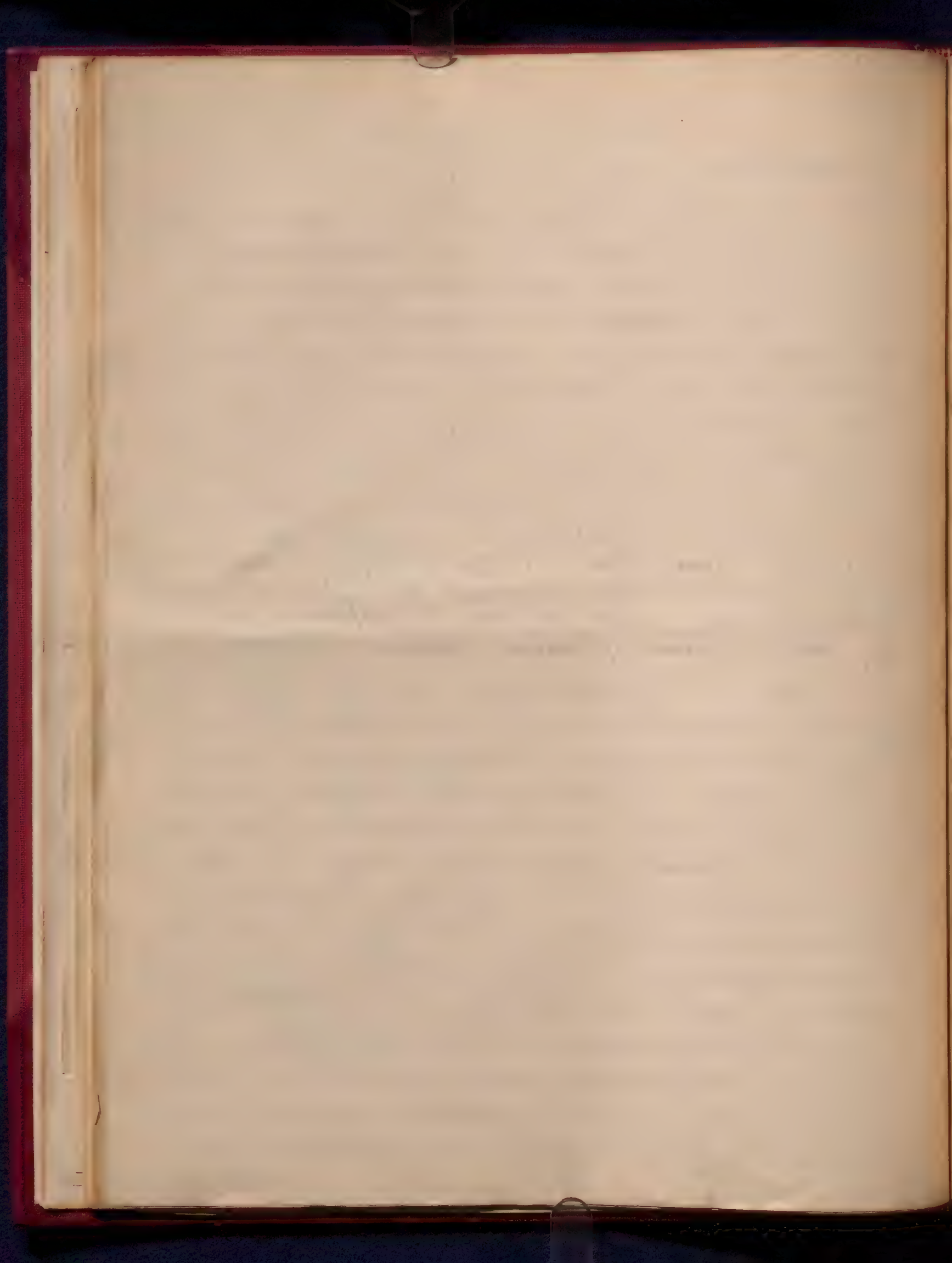
by flesh as flesh is by soul. Just so far as we appreciate the value of the fair mind in the fair body so far do we apprehend ideals expressed today in every department of life. The beautiful soul harmonizing with a beautiful body was as much the glorious ideal of Plato as it was the ~~prose~~ end of the education of Aristotle.

What a splendid picture in Book iii of the Republic, of the day when "our youth will dwell in a land of health, amid fair sights and sounds and receive the good in everything; and beauty the effluence of fair works shall flow into the eye and ear like a health giving breeze from a purer region, and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason".

The glory of this goal for the enrichment ^{the progress} of life was revealed to the Greeks as to no other people but in one respect ^{to} we care for the body of the common man we have only seen its fulfillment in our own day, ^{and} as a result of methods of research initiated by them

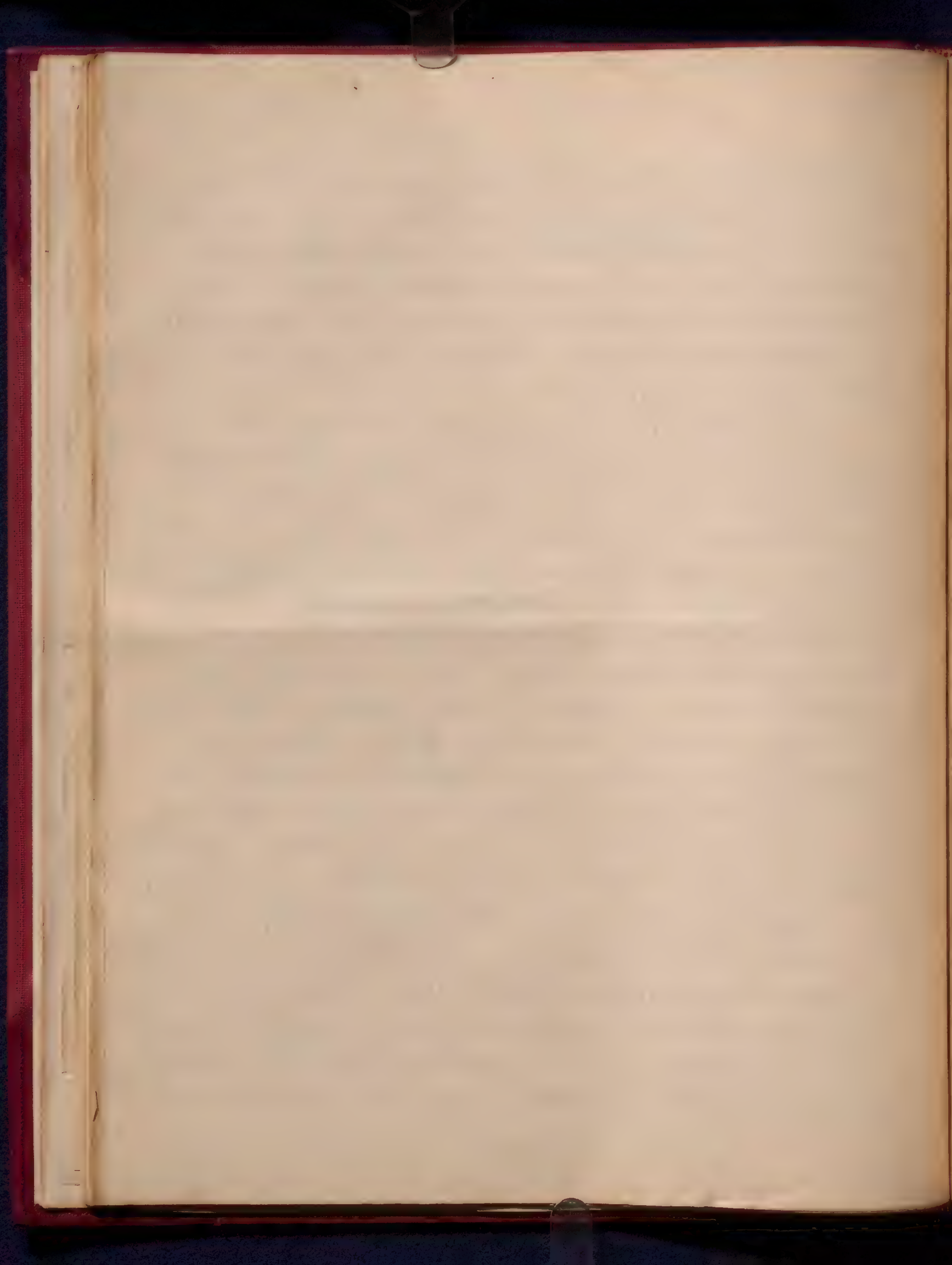
Philosophy, as Plato tells us, begins with wonder; and, staring open eyed at the starry heavens on the plains of Mesopotamia, man took ^{his first} a step in the careful observation of nature, which carried him a long way in his career. But he was very slow ^{to} learn ~~the~~ the second step - how to interrogate nature, to search out her secrets, as Harvey puts it, by way of experiment. The Chaldeans who invented the gnomon, and predicted eclipses, made a good beginning. The Greeks did not get much beyond trained observation, though Pythagoras made one fundamental experiment when he determined the dependence of the pitch of sound on the length of the vibrating cord. So far did ^{unaided} ~~unaided~~ observation and brilliant generalization carry Greek thinkers, that there is scarcely a modern discovery which by anticipation cannot be found in their writings. Indeed one is staggered at their grasp of great principles, ~~and~~ ^{and} could Democritus give the opening address at the new

electrical

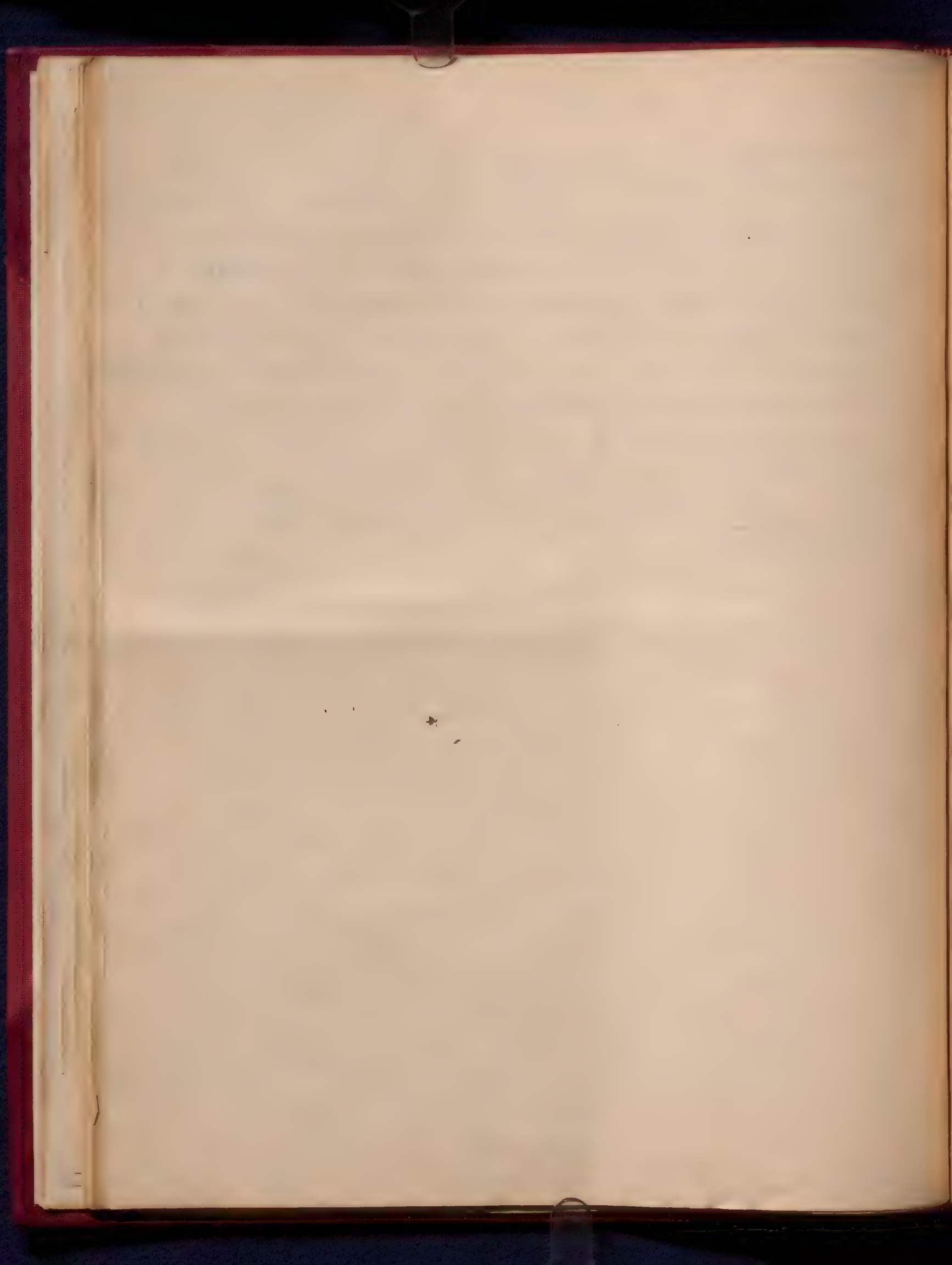


Laboratory he would maintain that his well known exposition of the Physical world had received renewed support by all the recent studies. Man can do a great deal by thinking, but he cannot find out nature and her ways. Had he been told, as the Greeks would have done it; and could Plato and Aristotle have grasped the value of experiment in the progress of human knowledge, the course of European history might have been very different.

As an introduction to the relation which medicine bears to this Greek civilization let me quote the paragraph from Professor Gomberg's 'Greek Thinkers'. "We can trace the springs of Greek success achieved and maintained by the great men of Hellas on the field of scientific inquiry to a remarkable conjunction of natural gifts and conditions." There was the teeming wealth of constructive imagination united with the sleepless critical spirit which shrank from no test of audacity; there was the most powerful impulse to generalization coupled with the sharpest faculty for descrying and distinguishing the finest shades of phenomenal peculiarity; there was the region of Hellas, which afforded complete satisfaction to the requirements of sentiment, and yet left the intelligence free to perform its destructive work; there were the political conditions of a number of rival centres of intellect, of a friction of forces, excluding the possibility of stagnation, and, finally, of an order of state and society strict enough to curb the excesses of 'children crying for the moon', and elastic enough not to hamper the soaring flight of superior minds. We have already made acquaintance with two of the sources from which the spirit of criticism derived its nourishment -- the metaphysical and dialectical discussions practised by the Eleatic philosophers, and the semi-historical method



which was applied to the myths by Locusts and Hieroglyphs. A third source is to be traced to the schools of the magicians. These aimed at eliminating the arbitrary element from the view and knowledge of nature, the beginnings of which were bound up with it in a greater or lesser degree, though practically without exception and by the force of an inner necessity. A knowledge of medicine was destined to correct that defect, and to shall mark the growth of its most precious fruits in the increased power of observation and the counterpoise it offered to hasty generalizations, as well as in the confidence which learnt to reject ante-rational fictions, whether produced by rampant imagination or by a priori speculations, on the slender ground of self-reliant sense-perception!



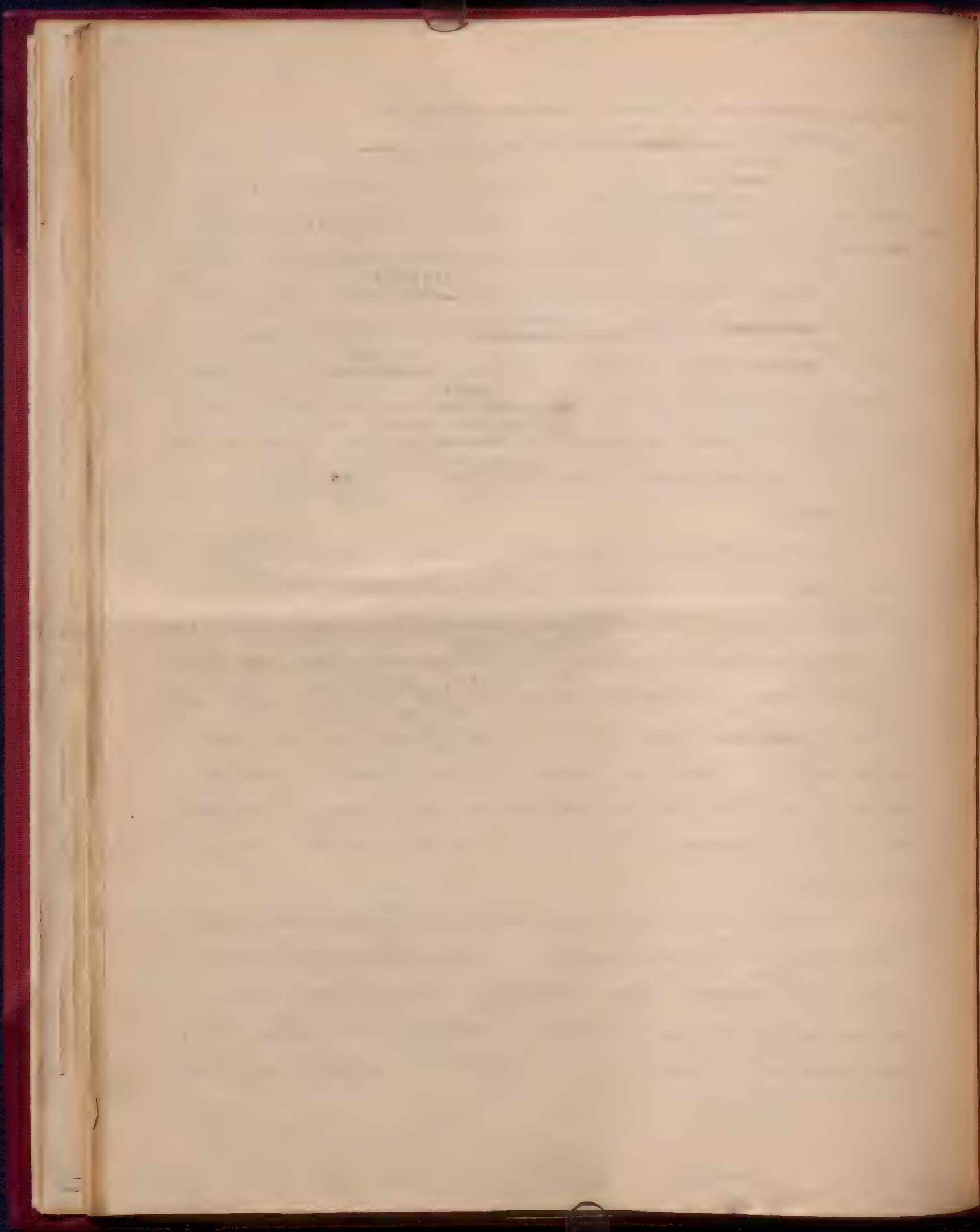
Three great lessons may be learned from Greek medicine

~~Medicine owes these debts to the Greeks, and in a brief consid-~~
~~eration of these~~ ^{which} we may get an outline of the conditions of this
^{in ancient times} department of thought. The first, and one of the most important, is
^{of medicine} its emancipation from religion, mysticism and superstition. Greece
was the meeting point of a double current, ^{Against} the Eastern mysticism
with its ~~various~~ ^{and} cults, ~~all expressed in sacrifices~~, devotion to
oracles, ^g ~~and its~~ hidden oriental mysteries, ^{always} ~~which were~~ in such high
estimation among the people, ^{which} ~~Against this~~ ^{the} strong current
of Ionian and Eleatic philosophy, ^{the final result was} ~~and secured~~ an independent position
for a science whose speculations ^{constitute} ~~have been~~ a permanent endowment for
human thought.

There is very little evidence in Greek literature ^{of the existence of the} ~~for the~~
crude superstitions and medical practices which are universal among
the savage tribes. In the Homeric poems the physician, ~~but well~~ ^{has a very simple}
in value many other men, ~~and his practice is very simple~~, and singu-
larly free from incantations and spells. ^{On a very special way} The history of Greek med-
icine is ~~specially~~ connected with the cult, Asklepios, the far-famed
son of Apollo. While of comparatively late origin it thrived with
wonderful rapidity: temples were erected far and wide, and before
the time of Alexander it is estimated there were between three and
four hundred.

"It is remarkable that the Asklepios cult" flourished mostly
in places which, through climatic or hygienic advantages, were nat-
-ural health resorts. Those favoured spots on hill or mountain, in
the shelter of forests, by rivers or springs of pure flowing water,
were conducive to health. The vivifying air, the well cultivated

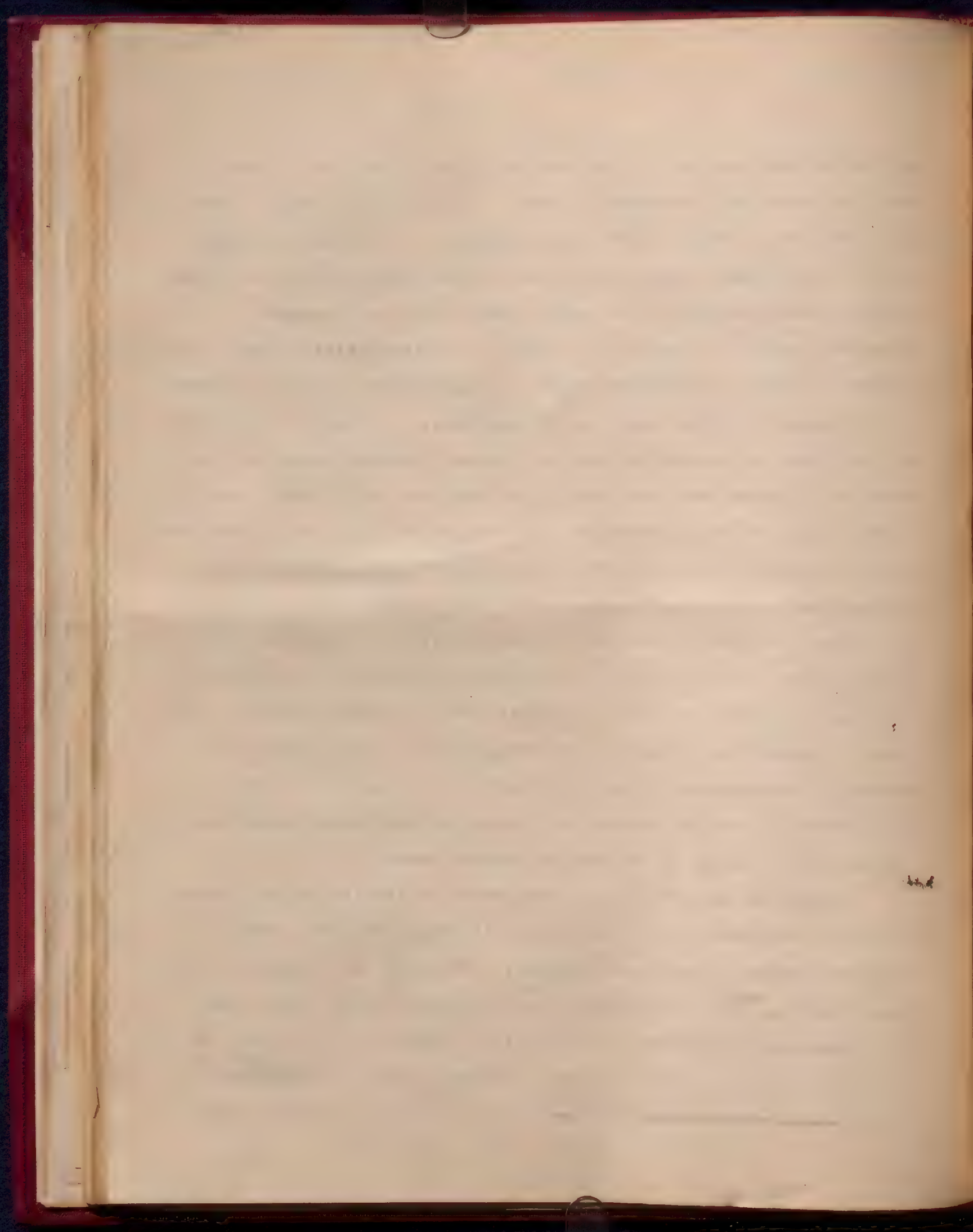
gardens



6

gardens surrounding the shrine, the magnificent view, all tended to cheer the heart with new hope of cure. Many of these temples owed their fame to mineral or merely hot springs. To the homely altars, erected originally by sacred fountains in the neighbourhood of health-giving mineral springs, were later added magnificent temples, pleasure-grounds for festivals, gymasia in which bodily ailments were treated by physical exercises, baths and inunctions, also as is proved by excavations, living rooms for the patients. Access to the shrine was forbidden to the unclean and the impure; pregnant women and the mortally afflicted were kept away; no dead body could find a resting-place within the holy precincts, the shelter and the cure of the sick being undertaken by the keepers of inns and boarding-houses in the neighbourhood. The suppliants for aid had to submit to careful purification, to bathe in the sea, river or spring, to fast for a prescribed time, to abjure wine and certain articles of diet, and they were only permitted to enter the temple when they were adequately prepared by cleansing, inunction and fumigation. This lengthy and exhausting preparation, partly dietetic, partly suggestive, was accompanied by a solemn service of prayer and sacrifice, whose symbolism tended highly to excite the imagination". (*Newberger*)

Among the most famous of these were the temples at Kos, Epidaur^Xos and Pergamos. The excavations at Epidaur^Xos have given a complete plan of a magnificent temple, situated in a space of more than 40 acres. The descriptions given by Pausanias and Strabo have been thoroughly confirmed. An excellent summary of the modern researches has been given by Caton. In addition to a ^{superb} magnificent temple ^a ~~to the god himself~~ ^{of the god} with his statue in ivory and gold, there



was a great dormitory in which the patients slept; a pump-room; the famous tholos built in the 4th century by Polykleitos; various shrines; a stadium; one of the most magnificent theatres in Greece; and even a coffer or box in which the sacred serpents were kept.

The ritual is fairly well known, chiefly from the delightful 'Plautas' of Aristophanes. After offering on the altar honey-cakes and baked meats the suppliants arranged themselves on the pallets.

Soon the Temple servitor
Put out the lights, and bade us fall asleep,
Nor stir, nor speak, whatever noise we heard.
So down we lay in orderly repose.
And I could catch no slumber, not one wink,
Struck by a nice tureen of broth which stood
A little distance from an old wife's head,
Whereto I marvellously longed to creep.
Then, glancing upwards, I behold the priest
Whipping the cheese-cakes and the figs from off
The holy table; thence he coasted round
To every altar, spying what was left.
And everything he found he consecrated
Into a sort of sack (')

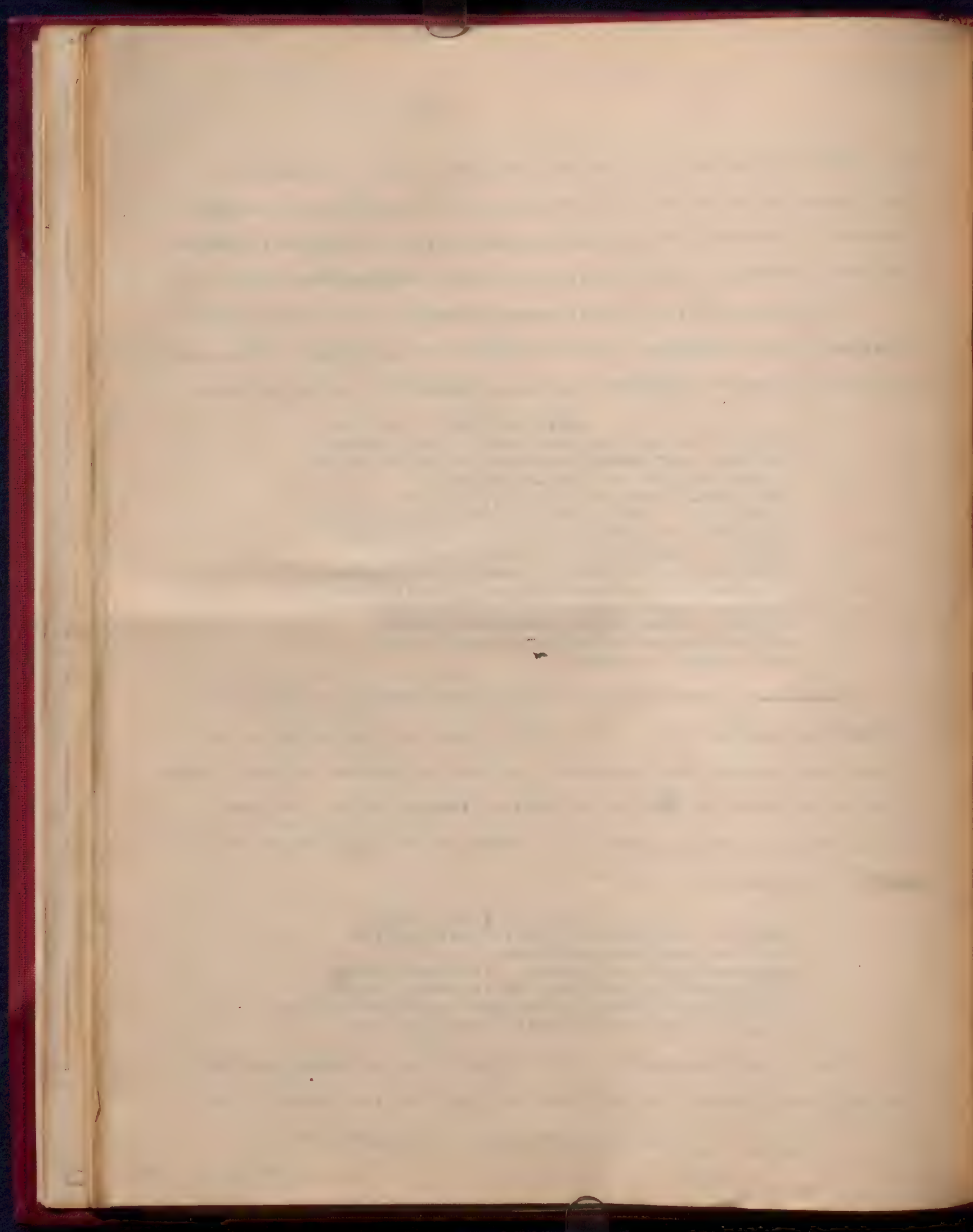
~~This is a~~ procedure which reminds one ~~somewhat~~ of the story of 'The Bell and Dragon'. Then the god came in the person of the priest, and scanned each disease. He did not neglect physical measures as he brayed in ^a the mortar cloves, Tenian garlic, verjuice, squills and Sphettian vinegar, with which he made application to the ~~eyes~~ of the patient.

Then the God clucked,
And out there issued from the holy shrine
Two great enormous serpents.
And underneath the scarlet cloth they crept
And licked his eye-lids, as it seemed to me;
And, mistress dear, before you could have drunk
Of wine ten goblets, Wealth arose and saw.

The incubation sleep in which indications of ~~sleep~~ cure were divinely sent, formed the most important part of the ritual. X The

(1) D. B. Rogers Translation, 1881. Bell & Sons London 1887

cult



The cult of Aesculapius spread wide throughout the ancient world, and so deeply engrained was the popular belief that the practice of the temple sleep was taken over by the early christians, and still persists in certain regions, and was practised in Wales as late as the early part of the 19th century. The ~~whole~~ story is well told in Miss Hamilton, now Mrs. Dickens' essay on 'Incubation for the Cure of Disease in Pagan Temples and Christian Churches' 1906. The ~~whole~~ ^{scene} scheme was an elaborate ~~suggestion~~ system of suggestion and faith-healing, practised amid surroundings which make Lourdes and St. Anne de Beaupré seem tawdry and insignificant. There were no doubt scores of cases which received much benefit; and the temples seem to have been a sort of combination of a modern health resort and hydro or sanatorium. Walter Pater gives a charming picture of the visit of Marius the Epicurian to Aesculapius' shrine in the Appennines. There were ~~two~~ well known ancient invalids who had colossal faith in the gods, and many of you recall the delightful lecture of Mr. last year upon Aelius Aristides, the arch-neurasthenic of ancient history, whose faith triumphed in good health after 17 years of effort.

In two ways Asklepios touches us in modern life. In the antique shops of Rome one finds scores of votive offerings representing the different parts of the human body -- eyes, ears, hands, feet, and breast rude representations of internal organs, which the grateful patients hung up in the temples, chiefly of Asklepios. This practice, taken over by the christian churches has continued to the present day, and the chapel of the famous Bambino ^{di Roma} Aracoeli, and the walls of the church of the Madonna del Parto are lined with the votive offerings of the faithful; much of the same type, though often much ruder in execution than those of the old Romans. Aesculapius is still the Saint of the medical profession, the emblematic god of healing, whose figure with its serpent, ~~is on the walls~~ and ~~clashes and strains~~ ^{is on the walls and clashes and strains}.

P. 2 f. 65

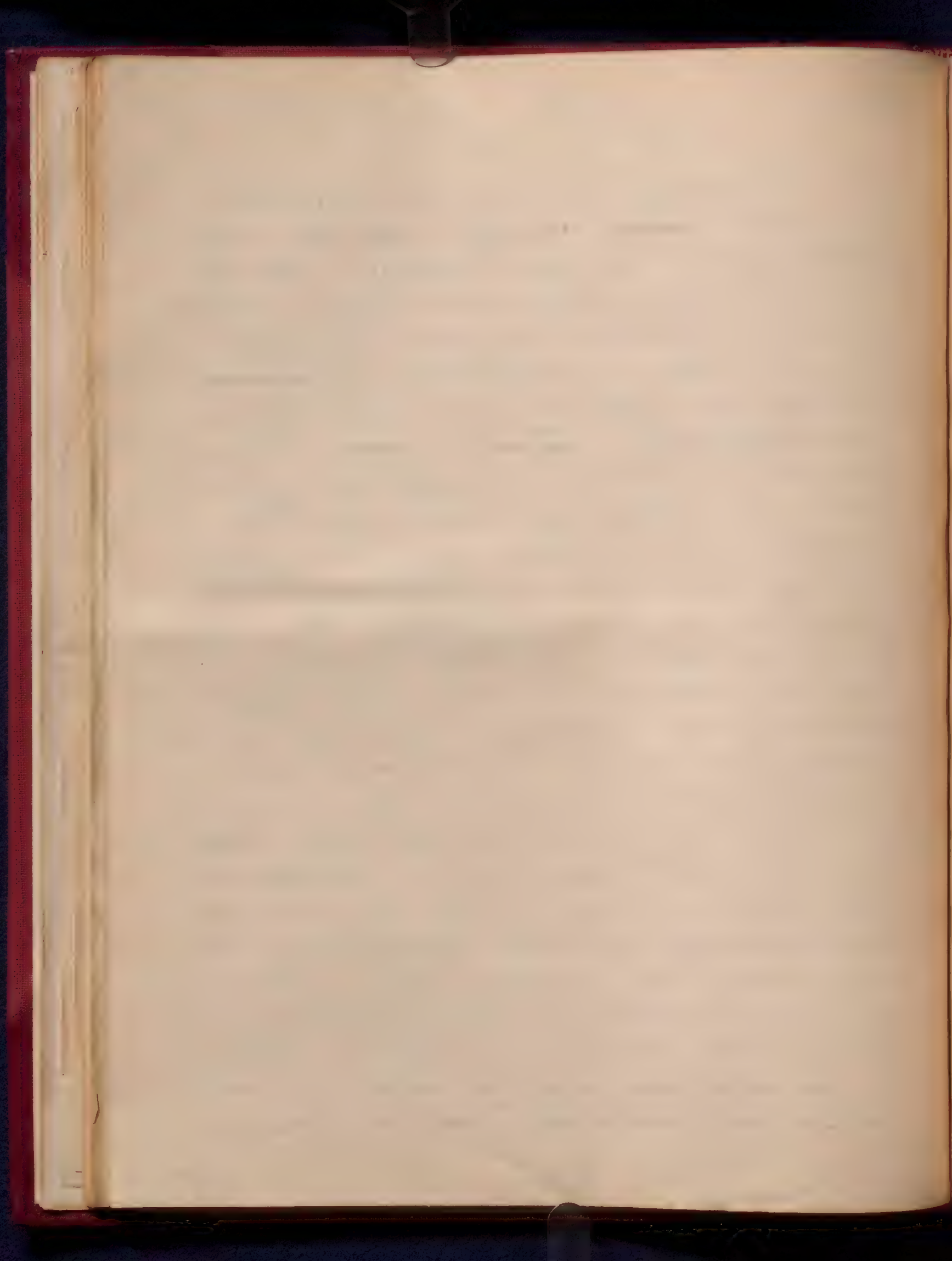
Notes

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It is one of the curious features of scientific Greek medicine that it ~~may have arisen~~ under the ~~very shadow~~, or ~~one may say~~ indeed within these temples of Aesculapius. In question-ably there were from the earliest days lay physicians. One hears of official city physicians at fixed salaries, whose duties were to look after the poor, and to manage epidemics. The well-known case of Democedes in the 6th century B.C., of whose migrations and large salaries Herodotus speaks, is ^{well} ~~the best~~ known instance. "From a reference in one of Plato's dialogues (Gorgias) they evidently were elected by public assembly, - 'when the assembly meets to ^{elect} ~~elect~~ a physician'. The office was apparently yearly, for in the Statesman is the remark, 'when the year of office has expired, the pilot or physician has to come before a court of review' to answer any charges that may be made against him. In the same dialogue occurs the remark, 'and if anyone who is in a private station has the art to advise one of the public physicians, must he not be called a physician?' Apparently a physician must have been in practice for some time and attained great eminence before he was deemed worthy of the post of State-physician. 'If you and I were physicians, and were advising one another that we were competent to practise as state-physicians, should I not ask you, and would you not ask me, Well, what how about Socrates himself, has he good health? And was any one else ever known to be cured by him whether slave or freeman?' A great deal is to be gleaned from Plato as to these lay practitioners and their assistants, who were often slaves, and who attended in dispensaries.

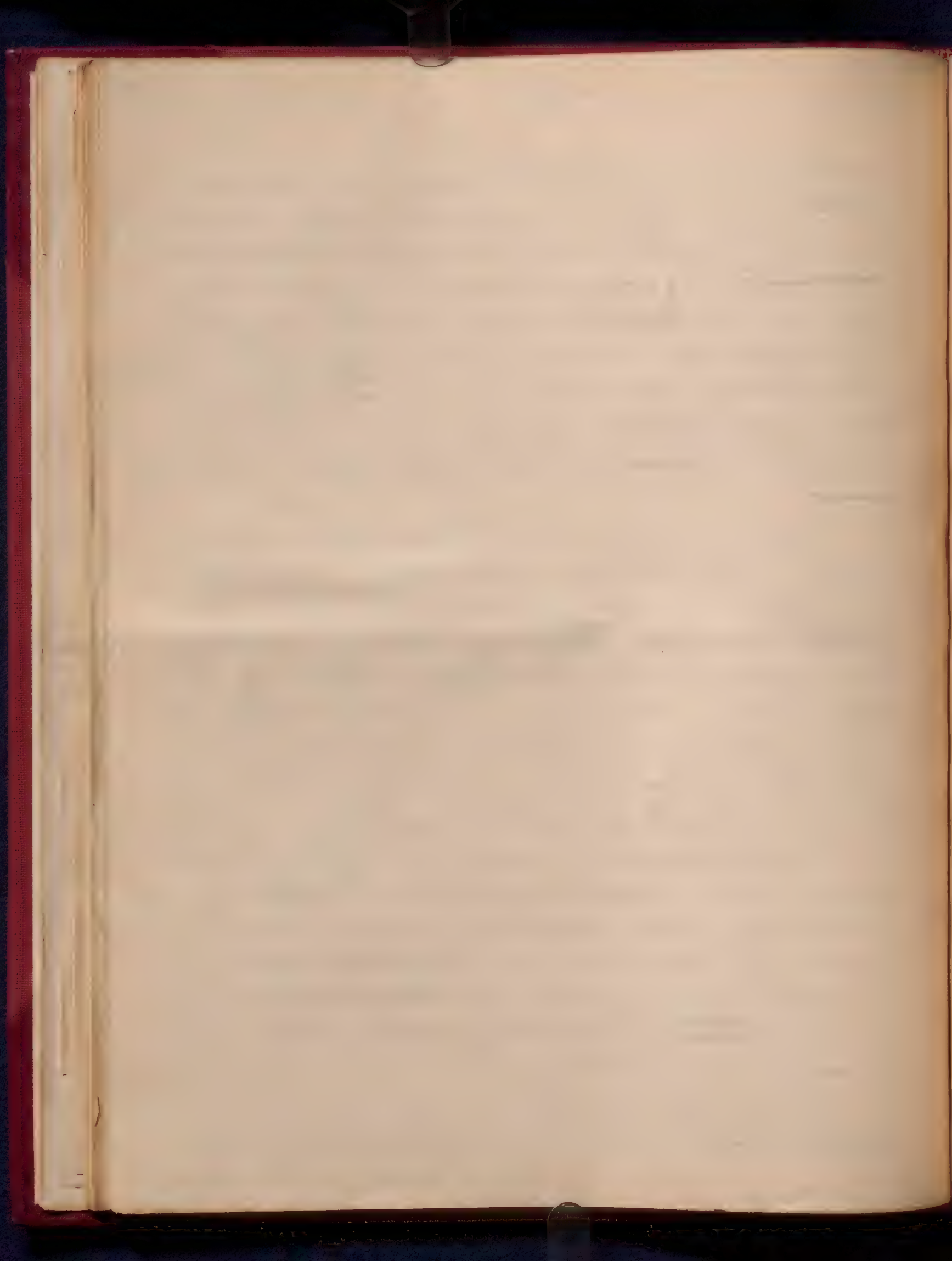
But the men who made the important progress were the secular physicians directly connected with the Aesculapian temples, forming



guilds or lay fraternities, the most important of which were those of Chios and Kos. It is not quite clear as to the exact connection between these Asclepiads, as they were called, and the temple priests. ~~It is highly~~ ^{Probably} ~~that~~ they were called in to the more serious cases, and to treat wounds and fractures. They were banded together in a fraternity with a special code of ethics, formalities, and ordinances, which were in some instances kept close ^{within} to the family circle. Formerly these Asclepiads were identified directly with the priests, but the view which I have just mentioned is the one which seems ^{most} ~~most~~ ^{likely} ~~probable~~.

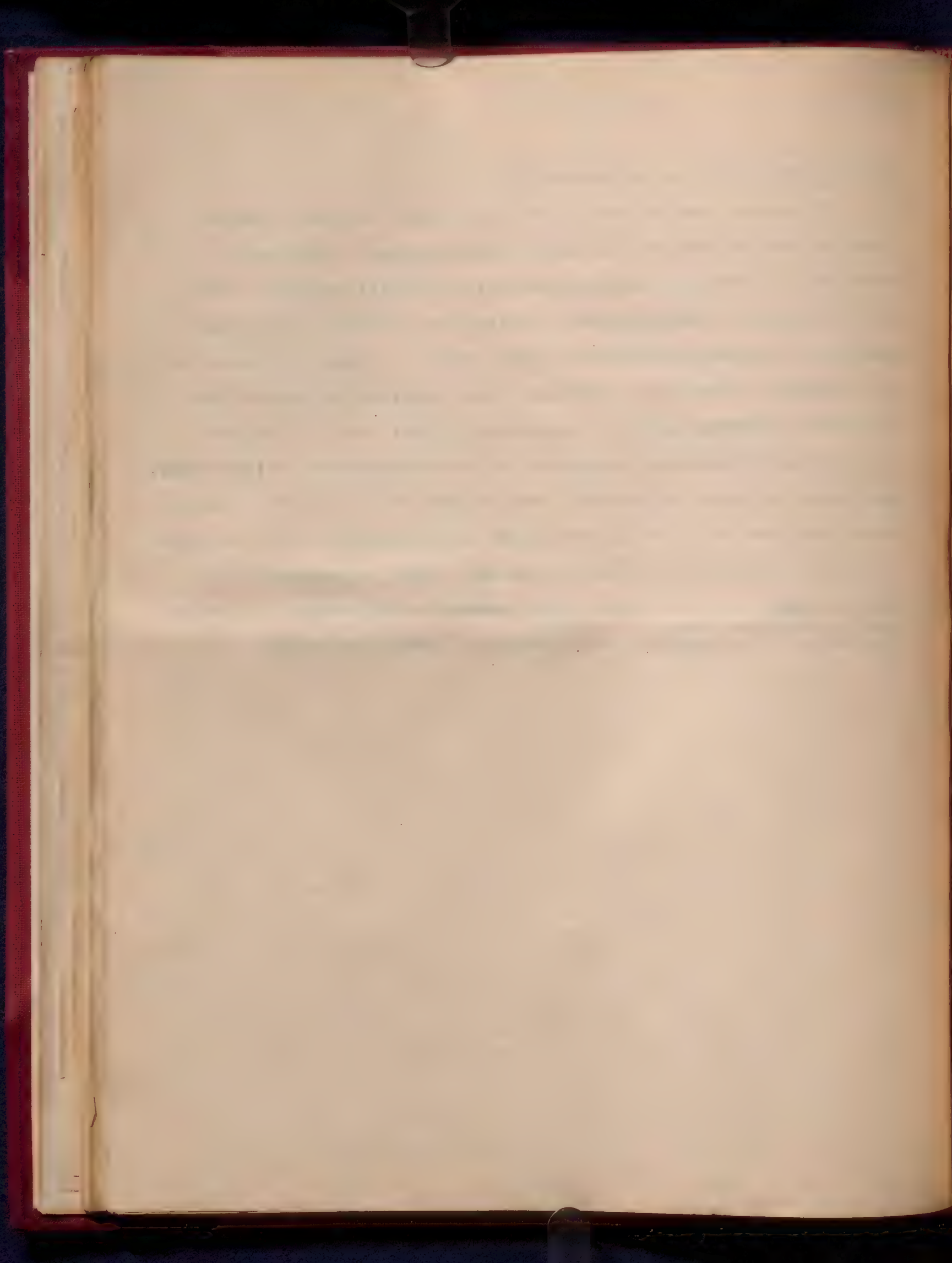
The temples must have furnished ^{many} opportunities for clinical research comparable with those of modern hospitals; and the larger ones contained rich libraries full of the records of cases. The ^{extraordinary} ~~remarkable~~ thing is that these ^{Asclepiads} ~~men~~ should have escaped so completely from the superstitious practices and theurgic rites which must have formed the very life of the temples. It is very much the same today at Lourdes where there are lay physicians who have to look after scores of patients whose faith is too weak, or whose maladies are too strong to be relieved by Our Lady of this famous shrine. But even into the Christian era we have evidence of the continued affiliation of some of the most distinguished physicians with the temples. I notice that Galen in one of his anatomical treatises speaks with affection of a citizen of Pergamos who had been a great benefactor of the Aesculapian temple of that city; and ~~I notice that~~ Pater mentions that the great ^{physician} ~~Galen~~ had himself undergone the temple sleep; I have not been able to find the reference.

When one looks through the list of the recorded cures at Epidaurus it must have indeed have been a House of Ramon to such a



man as Hippocrates, or to Eryximachus.

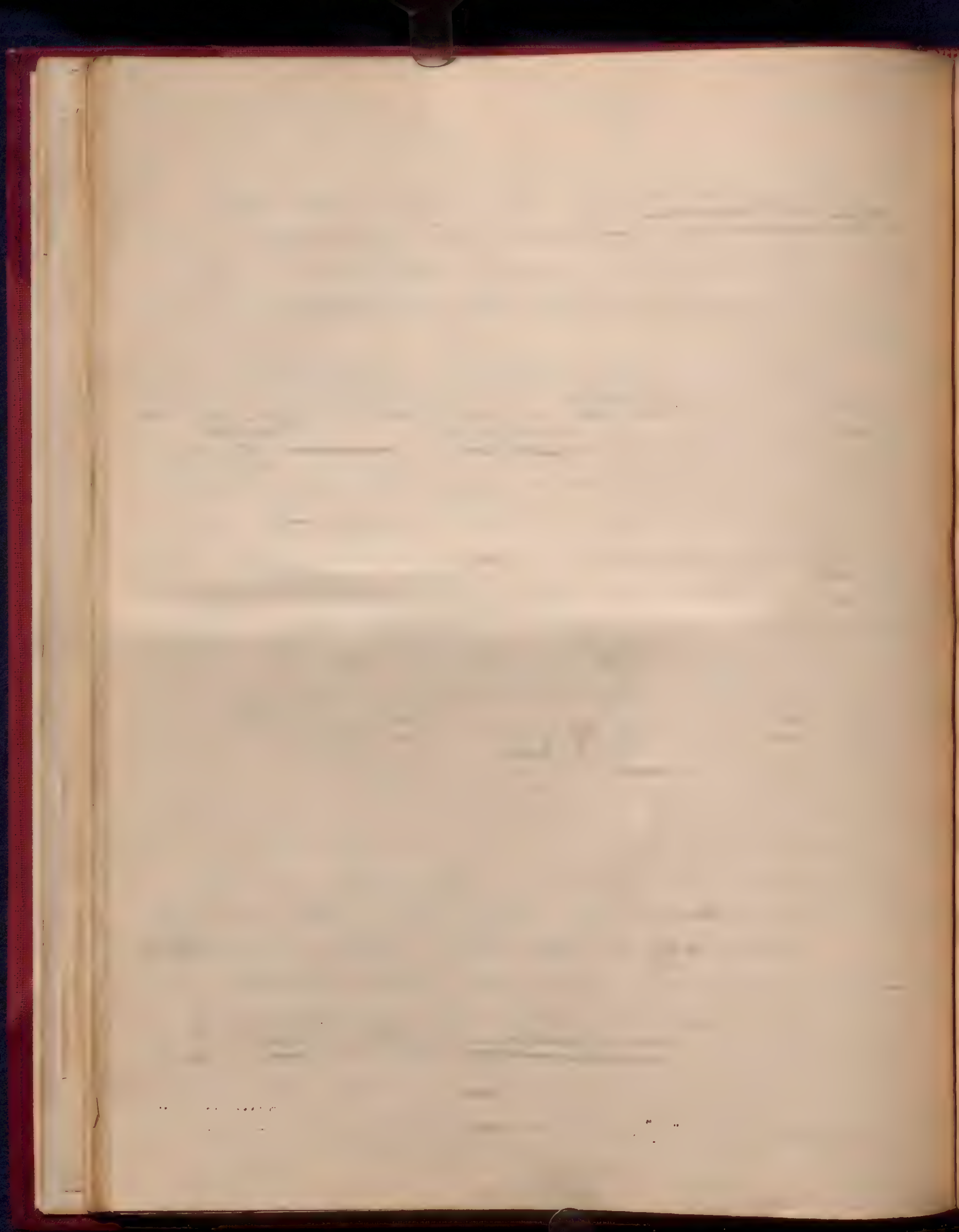
We get an idea of the nature of the cases from the inscriptions on the pillars, six of which were standing at the time of Pausanias. There are ~~also~~ numerous votive tablets recalling cures: 44 of these have been recovered. Blindness, diseases of the eye, paralysis, various affections of women, gout and wounds are among the most numerous. There are indications that surgical operations were performed, abscesses opened; and number 23 would seem to indicate that the god occasionally performed the modern operation of ~~cap~~perotomy. The sacred serpents and the dogs seem to have been trained to lick the wounds and tumours. In all ages these miraculous cures have the same monotonous character; they are paralleled today at Lourdes and at other shrines, and their persistence ~~unto the present day~~ is a strong ^{in part the power of faith in part} tribute to the colossal credulity which so easily besets us.



But the second and greatest lesson which the Greeks taught ^{relates to the phenomena} ~~of the natural nature~~ of the disease and ^{to} its rational method of cure. They first grasped the conception of medicine as an art based on accurate observation, an integral part of the science of man and of nature.

Human nature ~~has really changed~~ very little, and the conditions of practice today are ^{Singularly} ~~very much~~ like those of ancient Athens, and ~~these~~ ^{ancient} every vagary of medical practice ^{has its modern} ~~could be paralleled~~ today. ^{Countless} Thousands of people in Europe still believe in charms, incantations and amulets, which play such an important role in popular medicine; and I have known a distinguished statesman, yielding ^{and} to the solicitations of his family, for the sake of peace, adopt a much more foolish and disgusting remedy than did the great Pericles, who, Theophrastus tells us, consented to have an amulet put ^{about} ~~upon~~ his neck.

^{bases its} ~~Nearly every day one may see~~ in the full page advertisement of ^{the newspapers} ~~the Times~~ ^a the recommendation of gymnastics as ^{the} a cure-all of human ailments, and there are ^{many} ~~indeed~~ still followers of Herodotus the trainer, who as Plato says 'was of a sickly constitution, and by a combination of training and doctoring found out the way to torture, first and chiefly himself, and secondly the rest of the world'. The devout catholic may join ^{on the Avenue de Lourdes} ~~the~~ pilgrimage to Lourdes where he will find ^{the} ~~modern~~ substitutes ^{and modern substitutes} of the superb temple of the son of Apollo: ~~while~~ the Protestants with faith of a less simple but more astonishing character may get consolation or even healing in the churches of the Christian Scientist. ^{And the parallel is completed by the system - to} ~~And finally there is a body of men~~ deriving their inspiration from the old Greeks, ~~and~~ who maintain that disease is a process of nature to be studied, ~~and~~ that medicine is an art



based on accurate observations, ^{that it} ~~and~~ requiring education for its attainment, and skill and judgement in its practice. ~~After all it would have been very surprising if the science of medicine had not arisen in Greece.~~

^{main interest of} ~~There is~~ ^{of the old} Greek medicine centred about the person and writings of Hippocrates, an Asclepiad of ^{Cos} ~~course~~, a contemporary of Socrates. Precious little is known about him, but we have one or two interesting glimpses in Plato, where the young Hippocrates, son of Apollodorus "who has come to ~~Protagoras~~ ^{Protagoras}, 'that almighty wise man', as Socrates ~~terms him in another place~~, to learn the science and knowledge of human life, ~~as~~ asked by Socrates, 'If you were going to Hippocrates of Cos, the Asclepiad, and were about to give him your money, and some one had said to you, 'You are paying money to your namesake, Hippocrates of Hippocrates; tell me, what is he that you give him money?' now would you have answered?' 'I should say', he replied, 'that I gave money to him as a physician'. 'And what will he make of you?'

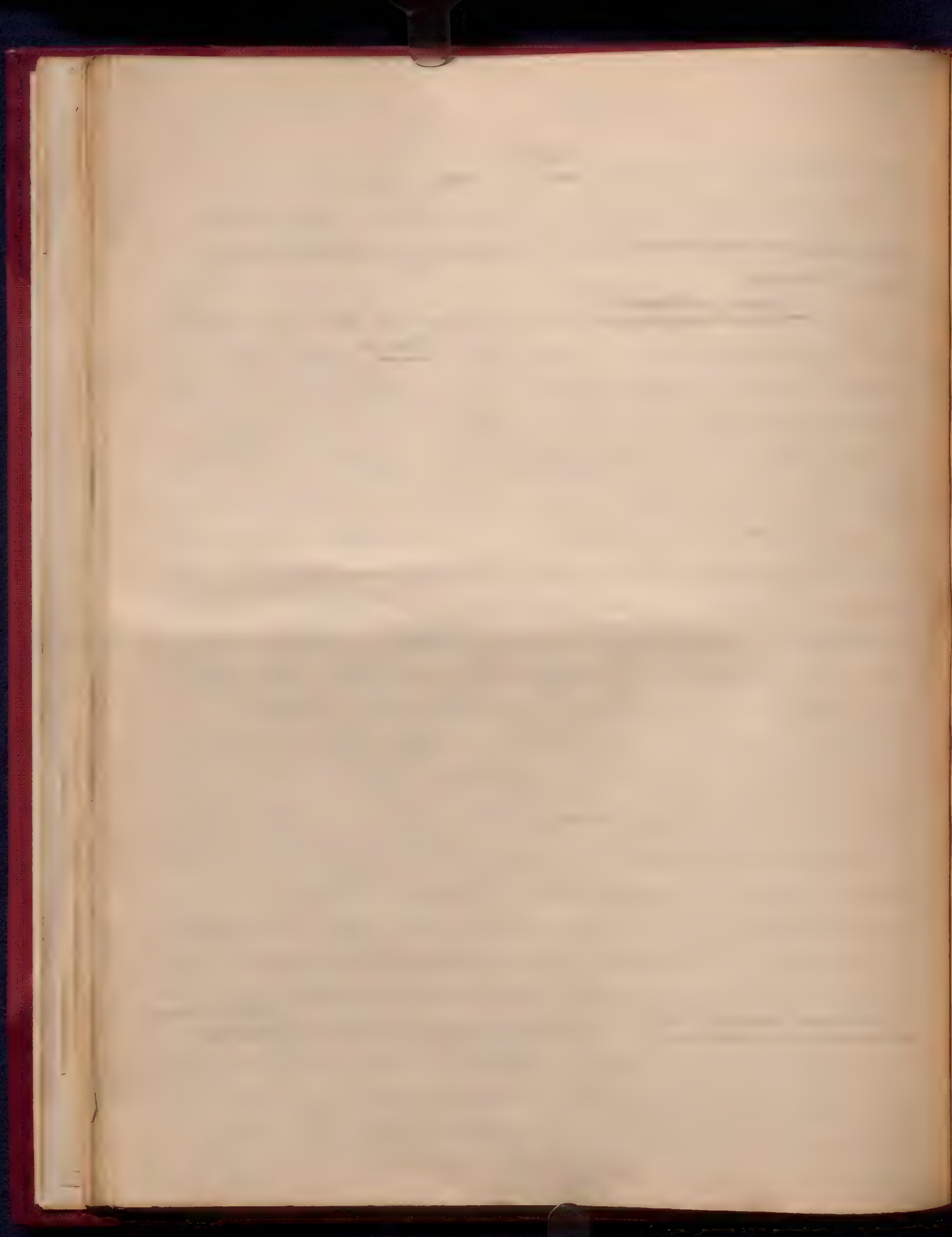
'A physician', he said -- a paragraph which would indicate that Hippocrates was in the habit of taking pupils and teaching them the art of medicine." And in another place Phaedrus replies: -- "Hippocrates, the Aesclepiad says that the nature even of the body could only be understood as a whole". We neither know how long he remained at Cos nor how long he practised at Athens, but that he made a great impression on his contemporaries is evident from the enthusiastic way to which he is referred; and Aristotle speaks of him as the great Hippocrates.

^{It is even doubtful what} ~~We do not even know how much of the Hippocratic writings are~~ ^{from his hand} ~~genuine.~~

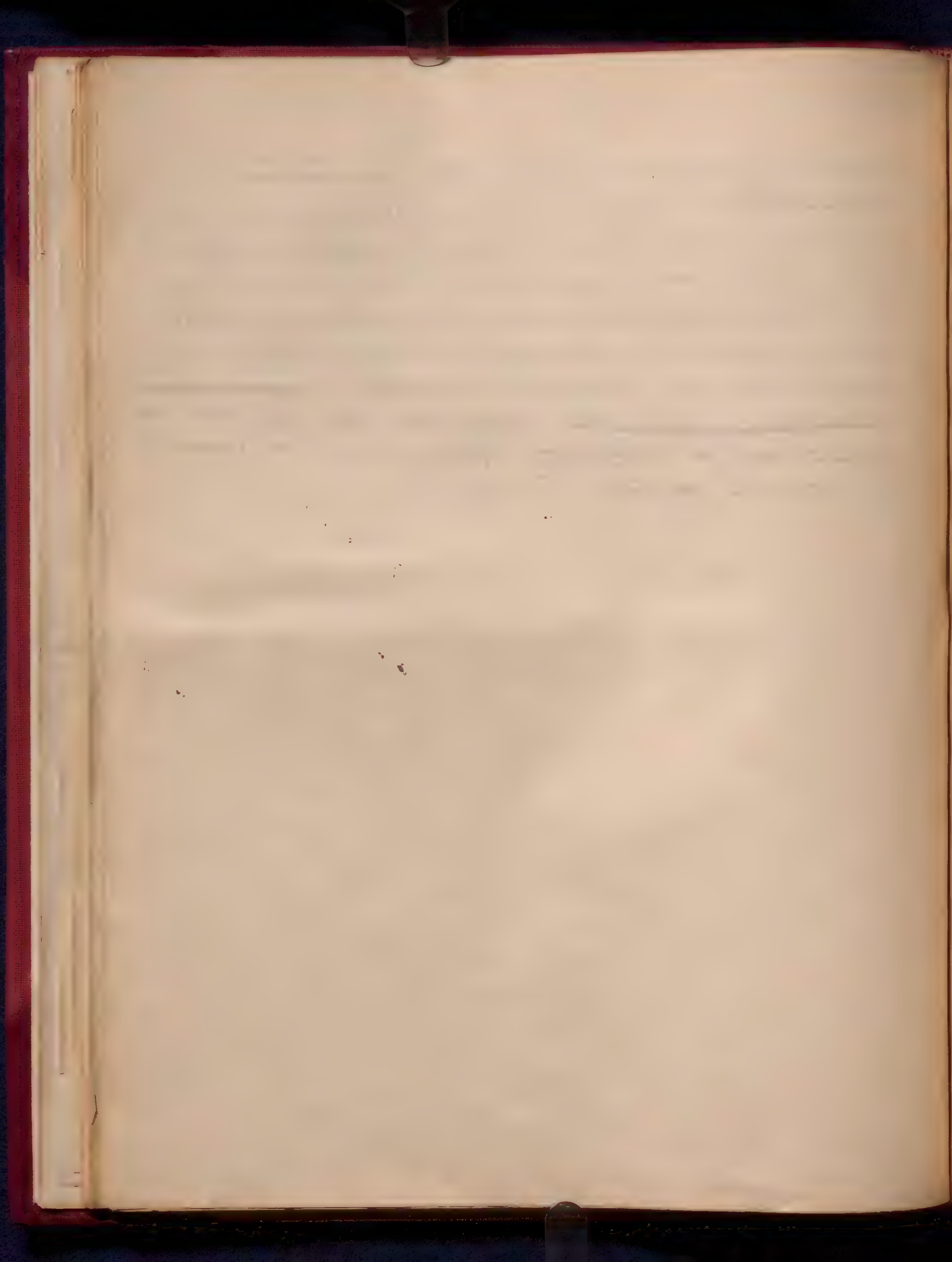
A few personal facts are gathered from the clinical histories of cases which he has left, 42 in number⁺, from which we gather that, as was the custom of many of the physicians he went about from place to place.

^{quote me in pass must both}

We



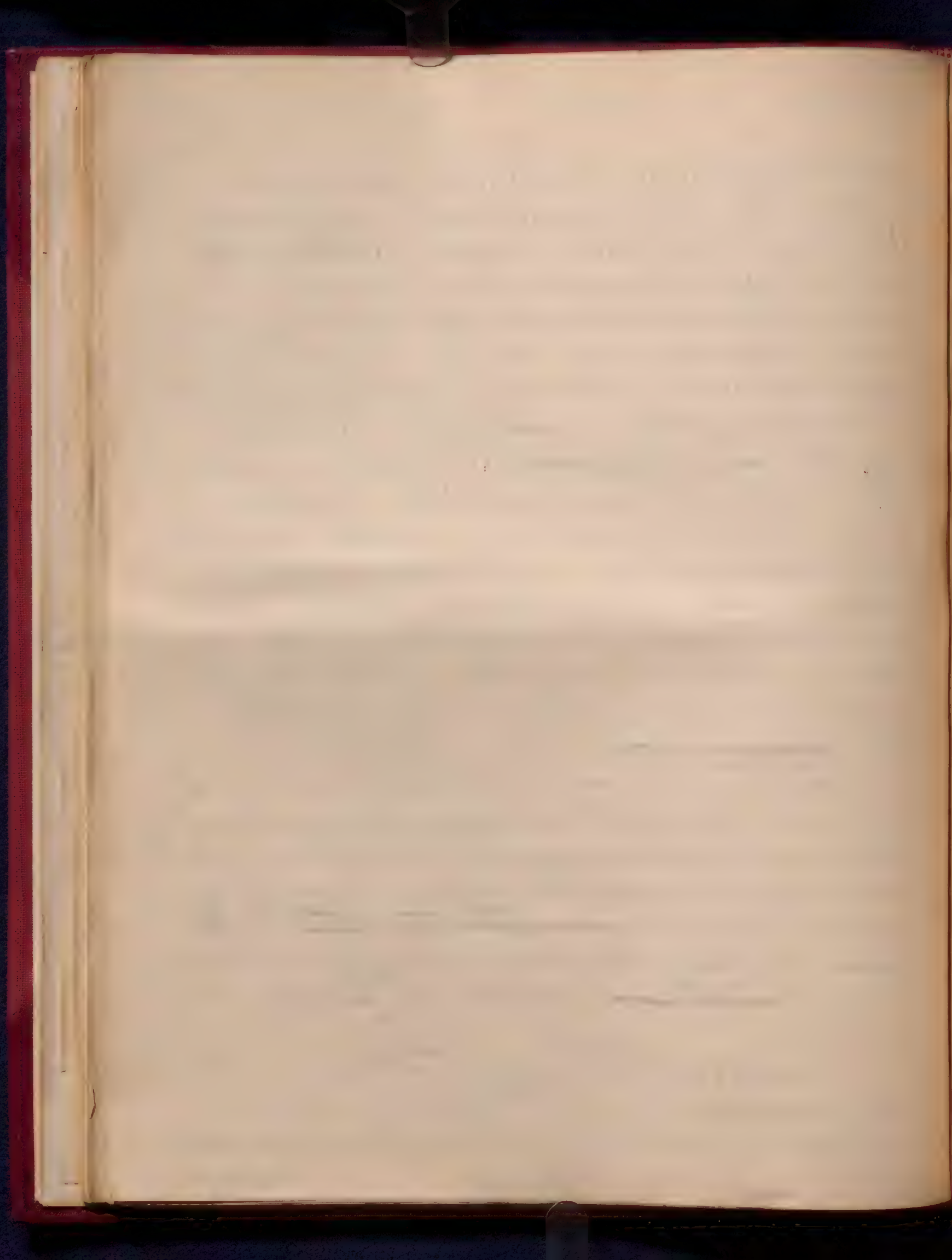
We know that he practised for a time at Abœra, ^{to which place he was} ~~and there is a well~~
^{called to} ~~known story of his consultation~~ over the case of Democritus, of which
you will find an excellent summary in Burton's 'Anatomy of Melancholy'.
Now if we ask what was the special merit of Hippocrates and his school
it may be said to lie in the development in the powers of observation,
and on the strong, clear common sense, which refused to be entangled
either in theological or philosophical speculations. ~~Homerz expresses~~
this very well in the following *It has been well said that what*
Socrates did for philosophy Hippocrates did for medicine
As Socrates devoted himself to



ethics, and the application of right thinking to good conduct, so Hippocrates insisted upon the practical nature of the art ^{and} in placing ~~the~~ highest good in the benefit of the patient. Empiricism, experience, the collection of facts, the evidence of the senses, the avoidance of philosophical speculations, these were the distinguishing features of Hippocratic medicine. One of the most striking contributions of Hippocrates is the recognition that diseases are only part of the processes of nature, that ~~there~~ is nothing divine or sacred about them. ~~One of the most striking.~~ With reference to epilepsy which was regarded as the sacred disease he says: -- "It appears to me to be no wise more divine nor more sacred than other diseases, but has a natural cause from which it originates like other affections; men regard its nature and cause as divine from ignorance". And in another place he remarks that each disease has its own nature, and that no one arises without a natural cause. He seems to have been the first to have grasped the conception of great healing powers of nature, ~~reasoning from the fact that~~. In his long experience with the cures in the temples he must have seen scores of instances in which the god had worked the miracle through the vis medicatrix naturae; and to the shrewd wisdom of his practical suggestions in treatment may be attributed in large part the extraordinary vogue which the great Canon has enjoyed for 25 centuries. ~~In the matter of~~ ^{One may appreciate the} ~~difficulty to appreciate the veneration with which the father of medicine was regarded~~ ^{by the} ~~and the attribute 'divine' was usually attached to his name.~~ ^{which}

^{of Hippocrates -} The famous ~~Aphorisms~~ ^{containing} were regarded as the ^{very} essence of the healing art ~~of medicine~~. (Story of Sir ^{William} Thomas Browne); and the famous first aphorism, which has become current coin in all literature ~~expresses~~

expresses

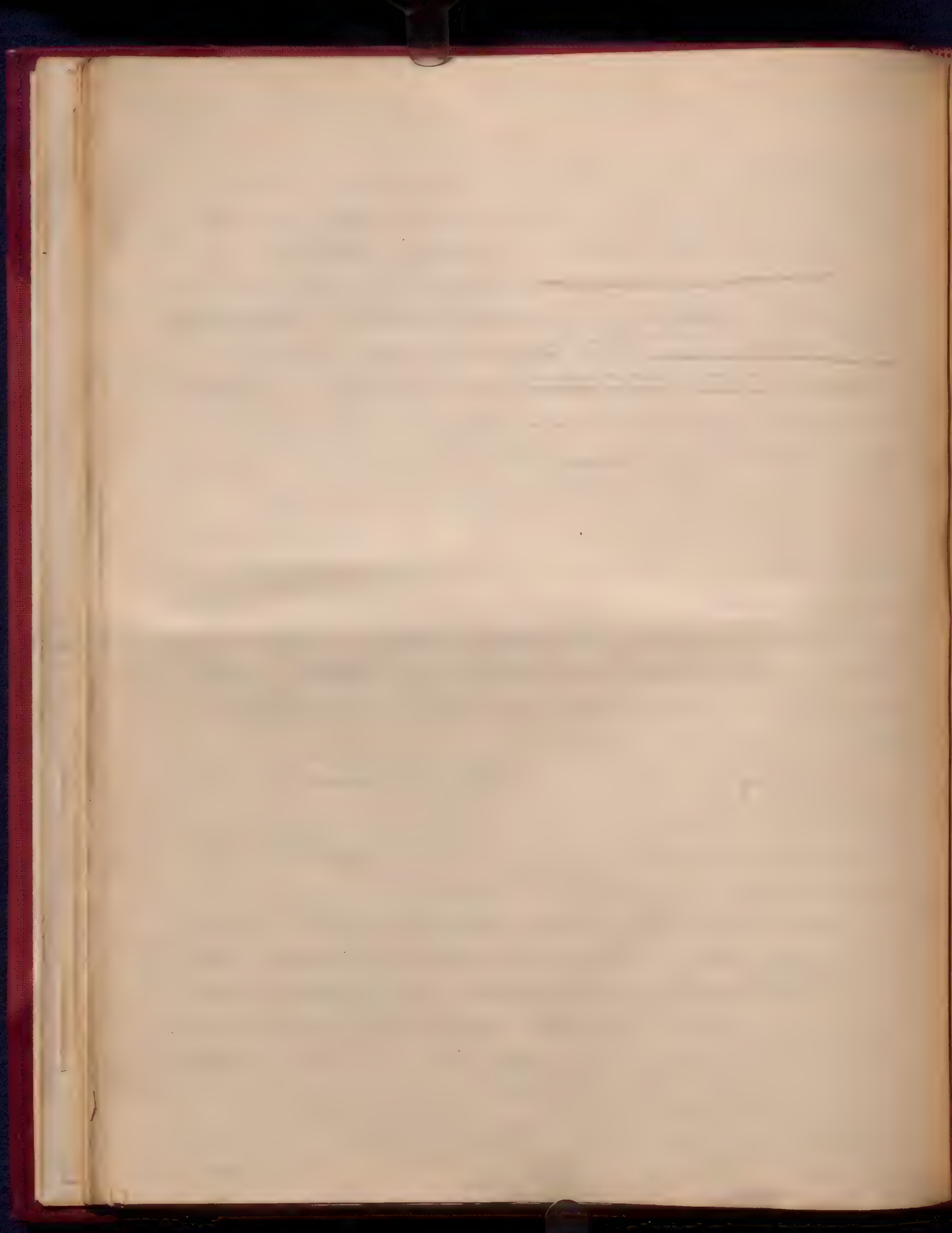


expresses better than all his writings put together the typically Grecian spirit of the man. "Life is short; art is long; opportunity is fleeting; experiment fallacious, and judgement difficult."

I have already mentioned that Hippocrates may be regarded as the final exponent of Greek medical thought ^{- the end not the beginning} of the period. ~~I have already~~ ^{an epoch and from now he was profoundly} referred to the important influence ^{of} the nature ~~of~~ philosophers. Pythagoras ^{in part controlled his views on} influenced greatly the practice of dietetics, and ^{while} his views on the mystical value of numbers ^{is} were directly responsible for the theory of critical days in disease which dominated medicine until recent time, and which has not yet entirely disappeared from the minds of the public. Not less important in its influence was the philosophy of Empedocles with the four elements, and the four qualities, heat, cold, moisture and dryness, as these really form the basis of the four humours, the four elementary juices, blood, phlegm, yellow and black bile, upon the due equilibrium of which in the body the health depends. This doctrine of the humours shares with the theory of critical days the dominance in Hippocratic pathology.

We may say then that the chief Hippocratic contribution of Greek medicine was the recognition of the true nature of the disease, and the introduction of observation as a means of studying their nature, and the more rational and simple methods of treatment.

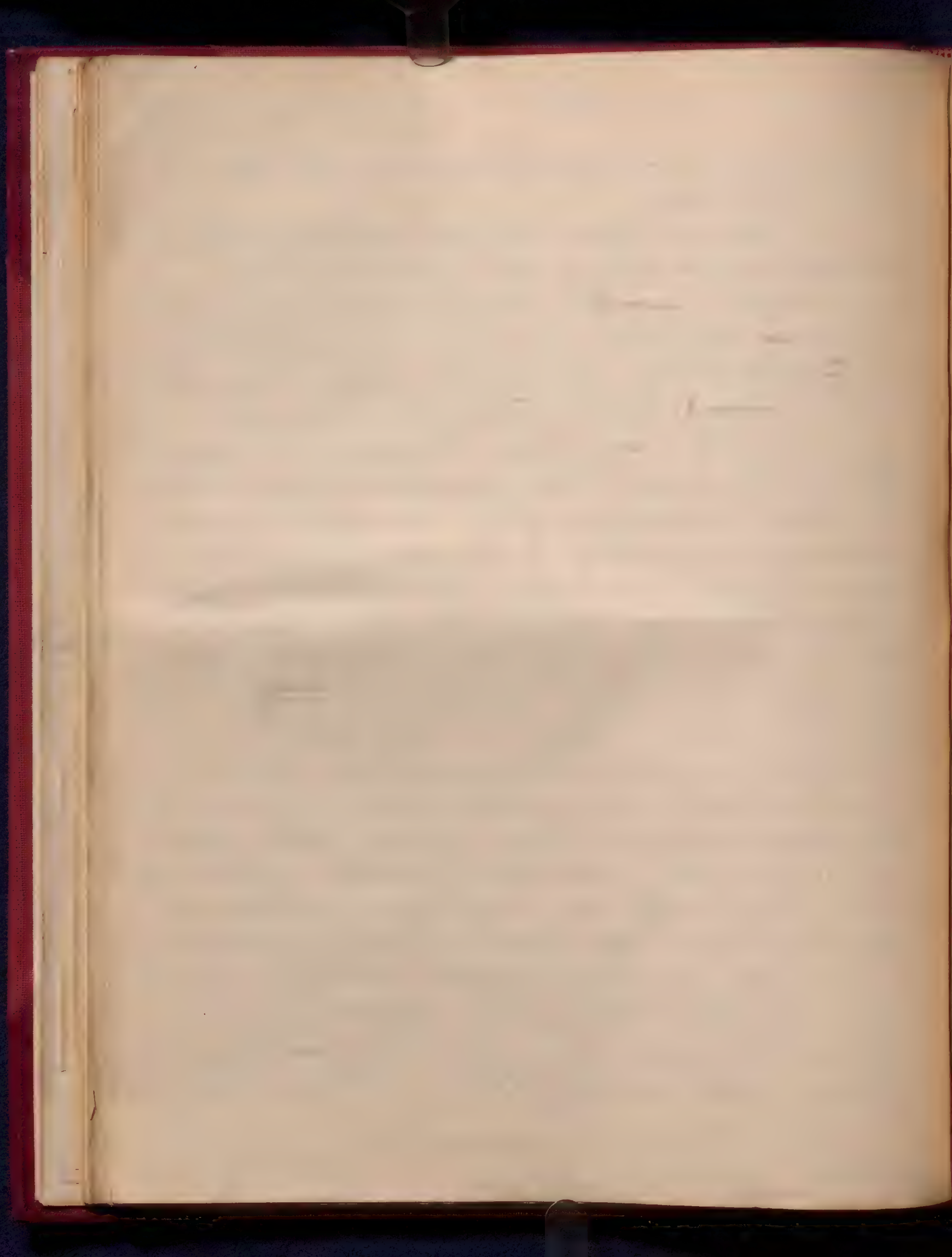
There are two other great periods of Greek medicine: the Alexandrian school in the 3rd century B.C. founded the science of ^{and pathology} anatomy. Unfortunately we know of the work of Herophilus and Erasistratus only through extracts from other authors, particularly from Galen. Not only for the first time were important parts of the body accurately described, but the functions of the parts were studied, and post mortems made in order to find out the nature of the disease. We may say that



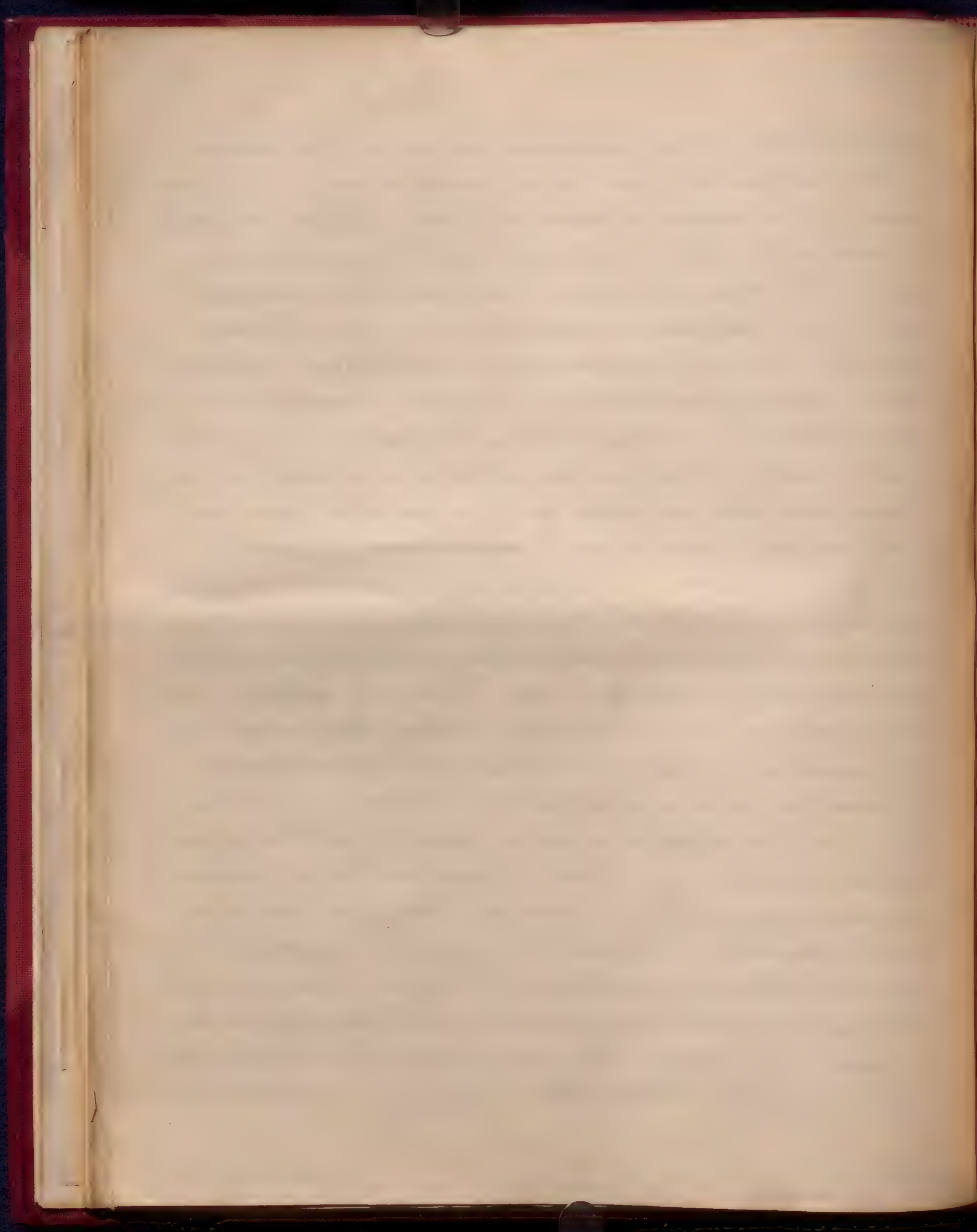
We may say that the scientific study of clinical medicine began in the Alexandrian School.

The final contribution of the Greeks to scientific medicine was made by the great Galen, who shares the Aesculapian kingdom with Hippocrates. ~~He was~~ Born at Pergamos, the Athens of Ionia in A.D. 130, and after receiving a very thorough education in philosophy, ^{he} ~~he~~ studied medicine at the best schools, including that of Alexandria. ~~He then~~ ^{he} At the age of 29 settled at his native town as physician in charge to the gladiators. He subsequently practised at Rome for several periods, and became court physician to three Emperors in succession, including Marcus Aurelius. He is the most voluminous of the ancient medical writers, and a very large body of his works have been preserved. Many of them are but commentaries and compilations and they do not deal exclusively with medicine. His mind was naturally eclectic, and he could not identify himself with any of the prevailing schools, but regarded himself rather as a ^{disciple} ~~follower~~ of Hippocrates. He followed the Alexandrians in making an exhaustive study of anatomy, but having no opportunity to dissect human bodies he had to use the ape and the pig. His contributions to the subject are the most important of the ancient authors. He laments the great difficulty in studying human anatomy owing to the prejudice against dissection. He urges the student to be on the look-out for an occasional human bone which may perhaps be exposed in a grave yard situated near a stream, which in flood exposes the graves. Or occasionally the body of a malefactor is regarded with such horror that no one will undertake its burial, and after the birds and beasts have picked the bones bare they may be available for study. And then he mentions

pathetically



pathetically that failing these sources there are still two skeletons at Alexandria which may be used for the purposes of study. He followed Aristotle in his devotion to comparative anatomy, and made a vast number of dissections of animals of all kinds. But what gives to Galen his unique position among the ancients is the introduction of experiment with a view to elucidating the functions of the parts. With these methods he made a most exhaustive study of the circulation. He showed that the arteries did not contain air but blood; he described the structure and action of the heart, and the significance of changes in its action in disease. Considering how much he did it is astonishing that he should have missed discovering the circulation of the blood. But he was lead into all sorts of errors ~~on this subject~~ which prevailed until the time of Harvey. In the structure and function of the nervous system his studies were of the very highest importance as he demonstrated that while some nerves subserved a purely nervous function, others were sensory, others again mixed. He knew the conducting functions of the spinal cord, and worked out the physiology of some of the local nerves, such as that controlling the production of the voice. Altogether there is no ancient physician in whose writings one finds indications of so many modern methods of research. His views of disease in general are very much those of Hippocrates, but he introduced an extraordinary number of refinements and subdivisions according to the predominance of the four humours, the harmonious combination of which means health or eucrasia, while the perversion or improper combination leads to dyscrasia or ill health. It may interest you to hear an account of his methods of practice in the case of his imperial patient, Marcus Aurelius, shortly after his return from his campaign *

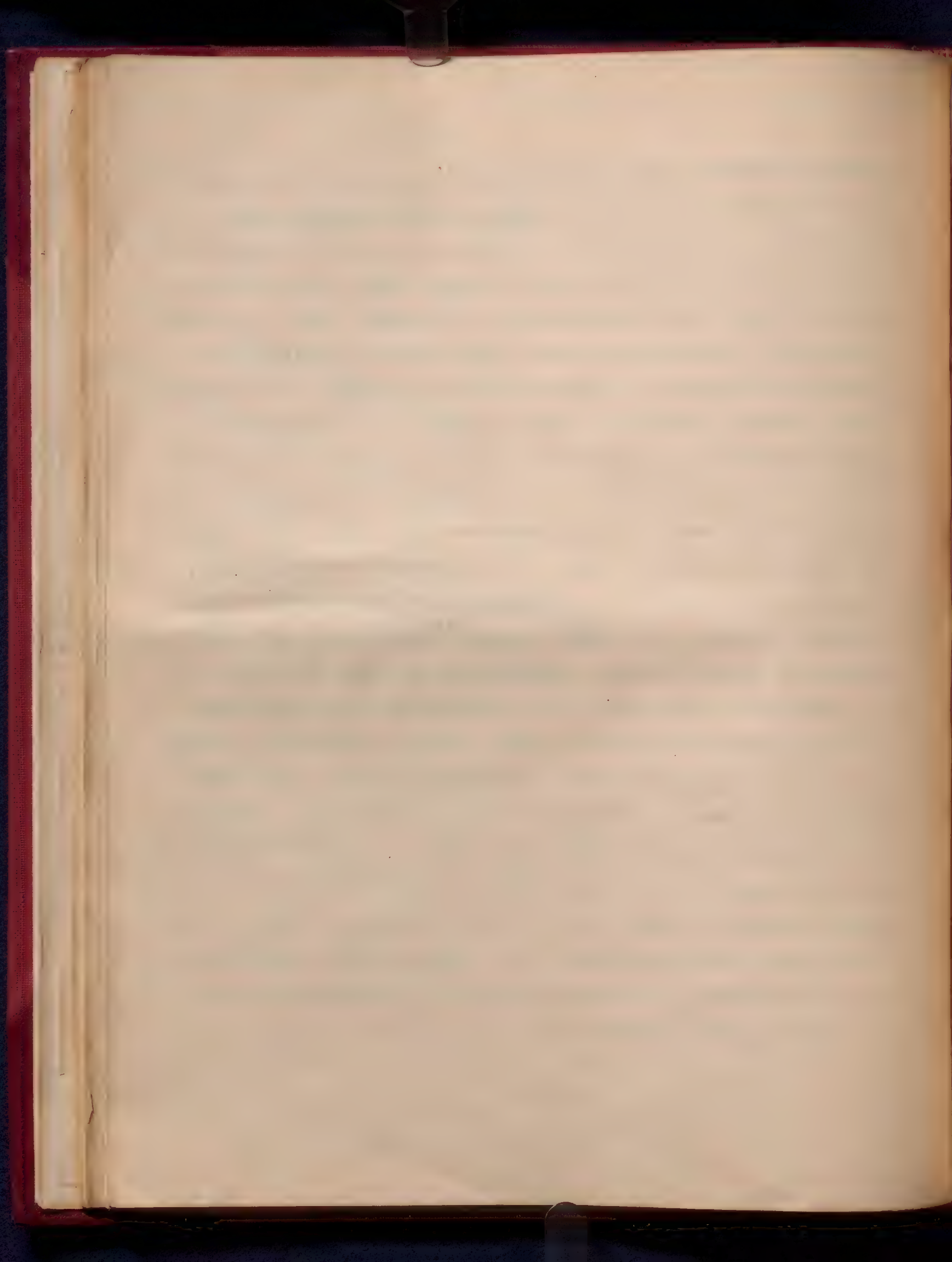


against the Germans. He was ill and sent a message to Galen requesting him to sleep at the palace. "Hardly had he got there when a slave came in, lighted the lamps, and summoned him to the emperor's bedroom. Here he found three army surgeons feeling his pulse, who said that he was in the early stages of a feverish attack. The emperor asked Galen for his opinion, but he replied that those who had been with him during the campaign would be the best judges. 'However on special command I felt his pulse, and finding it quite normal, considering his age and the time of day, I declared it was no fever but a digestive disorder, due to the food he had eaten, which must be converted into phlegm before being excreted. Then the emperor repeated three times, 'That's the very thing', and asked what was to be done. I answered that I usually gave a glass of wine, with pepper sprinkled on it, 'but for you kings we only use the safest remedies and it will suffice to apply wool soaked in hot nard ointment locally'. The emperor ordered the wool, wine etc. to be brought, and I left the room. His feet were warmed by rubbing with hot hands, and after drinking the peppered wine, he said to Pitholaus (his son's tutor), 'We have only one doctor and that an honest one', and went on to describe me as the first of physicians, and the only philosopher, for he had tried many before who were not only lovers of money, but also contentious, ambitious, envious and malignant". (Withington)

He laid extraordinary stress upon the pulse, and in no part of his writings are the theoretical speculations carried to greater length. I daresay all of you remember the interesting story given by Plutarch in the life of Demetrius of how Erasistratus made the diagnosis of the cause of the illness of Antiochus by feeling his pulse when Stratonicus came into the room; and Galen gives a similar story that is worth reading. (Finlayson p.37 foot-note)

against the Germans. He was ill and sent a message to Calen request-
-ing him to sleep at the papade

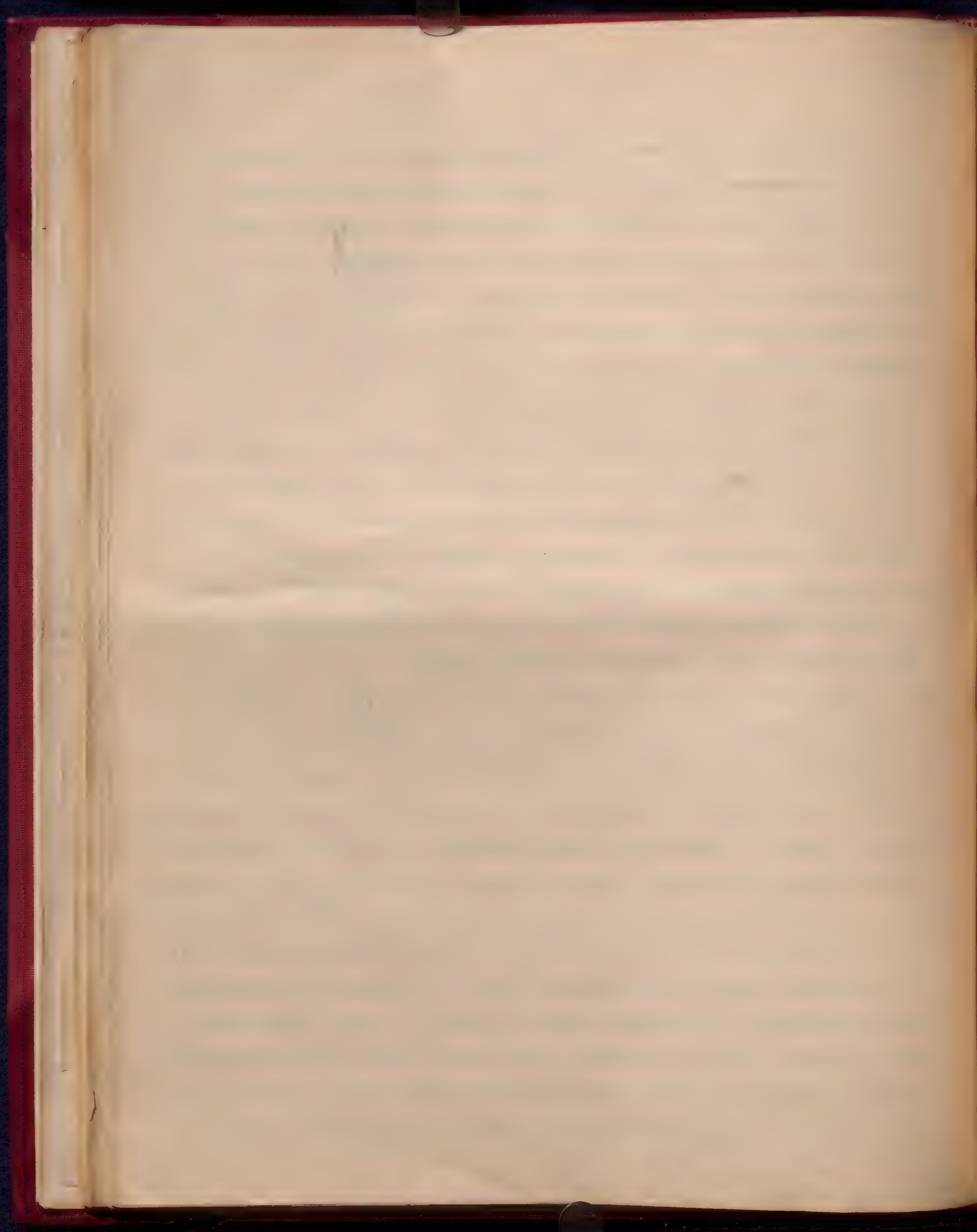
He has not the same simple methods either in description of cases or in the treatment of disease that characterised his great master Hippocrates. He has great faith in drugs, and collected plants from all parts of the known world, for the sale of which he is stated to have had a shop in the neighbourhood of the forum. One of his compositions is the famous 'theriaca', from which the English word 'treacle' is derived. According to Galen's formula it had 74 ingredients, the most important of which is opium. It was regarded as a sort of cure-all, an antidote to poisons, and given extensively in fevers. It has perhaps been the most widely used of all prescriptions, and has persisted until the present day; only a few years ago it was in the French Codex, even to the dried powdered vipers, which under the doctrine of similia similibus were regarded as an important antidote. No ~~other~~ physician ever occupied the commanding position of Claudius Galen: unfortunately this was due neither to his Hippocratic methods nor to the introduction of the experiment, but to his premature attempt to found a system of medicine, in which he tried to reduce all knowledge to general theoretical principles. Throughout the middle ages he dominated medical thought as powerfully as did Aristotle in the schools, and it was not until the renaissance that daring spirits began to question the infallibility of this medical pope; then as so often happens, but scant justice was done him; but we now recognize the importance of his work, and our indebtedness to him for introducing the method by which all important progress has been made in modern medicine.



The third great lesson of Greek medicine is that the practice of the physician requires the mind of an educated gentleman. The necessary qualifications for the successful study of medicine as laid down by Hippocrates have never been surpassed, and have a very modern flavor. "Whoever is to acquire a competent knowledge of medicine ought to be possessed of the following advantages: a natural disposition; instruction; a favourable position for the study; early tuition; love of labour; leisure. First of all, a natural talent is required; for when nature opposes, everything else is vain; but when nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil in a place well adapted for instruction. He must also bring to the task a love of labour and perseverance, so that the instruction taking root may bring forth proper and abundant fruits.

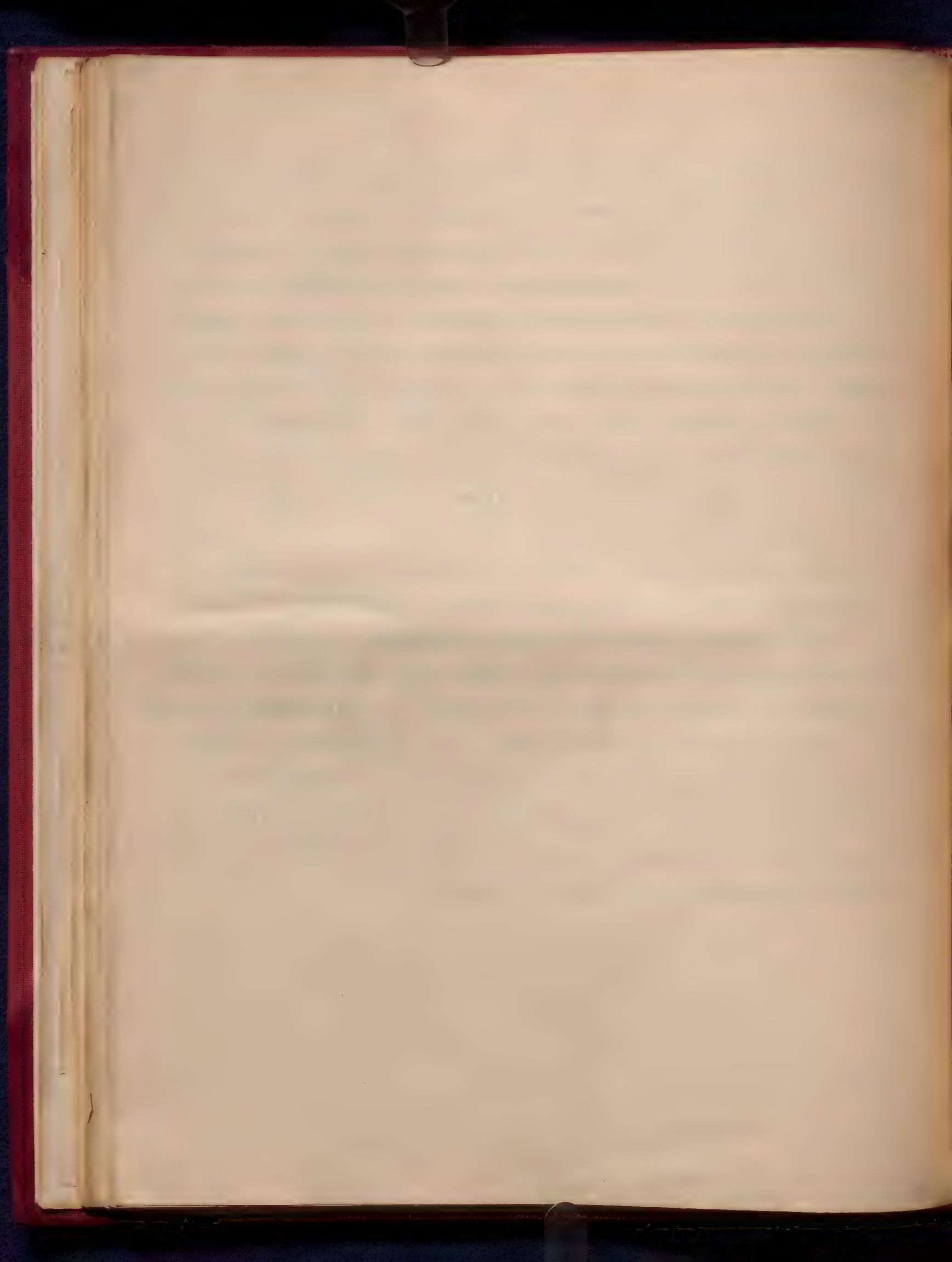
.....But experience is a bad treasure and a bad fund to those who possess it, whether in opinion or in reality, being devoid of self-reliance and contentedness, and the nurse both of timidity and audacity. For timidity betrays a want of power and audacity a want of skill. There are indeed, two things, knowledge and opinion, of which the one makes its possessor really to know, the other to be ignorant." (Hippolytus)

The whole tone of the Hippocratic medicine is at a high level, and the human side of the physicians work is everywhere insisted upon. The combination of brains and heart is urged as in the noble remark "Where there is love of humanity there will be love of the profession. Touting for fees is discouraged; consultations in doubtful cases are advised. "If two or more days of medical treatment were possible,



the physician was recommended to choose the least imposing or sensat-
-ional; it was an act of 'deceit' to dazzle the patient's eye by
brilliant exhibitions of skill which might very well be dispensed
with. The practice of holding public lectures in order to increase
his reputation was discouraged in the physician, and he was especial-
-ly warned against lectures tricked out with quotations from the
poets. Physicians who pretended to infallibility in detecting even
the minutest departure from their prescriptions were laughed at; and
finally there were precise bye-laws to regulate the personal behav-
-iour of the physician. He was enjoined to observe the most scrup-
-ulous cleanliness, and was advised to cultivate an elegance removed
from all signs of luxury, even down to the detail that he might use
perfumes, but not in an immoderate degree." (Gomperz).

But the high water-mark of moral elevation is reached in that
remarkable document the Hippocratic Oath, which has well been called
a monument of the highest rank in the history of civilisation (Gomperz).
For twenty five centuries our 'credo', it is in many universities
still the formula with which men are admitted to the Doctorate.
At McGill we used the old Latin modification, and when Registrar of
the Medical Faculty I had to swear into the Guild what it the mem-
-bers of the graduating class with uplifted hands.



Hippocratic Oath.

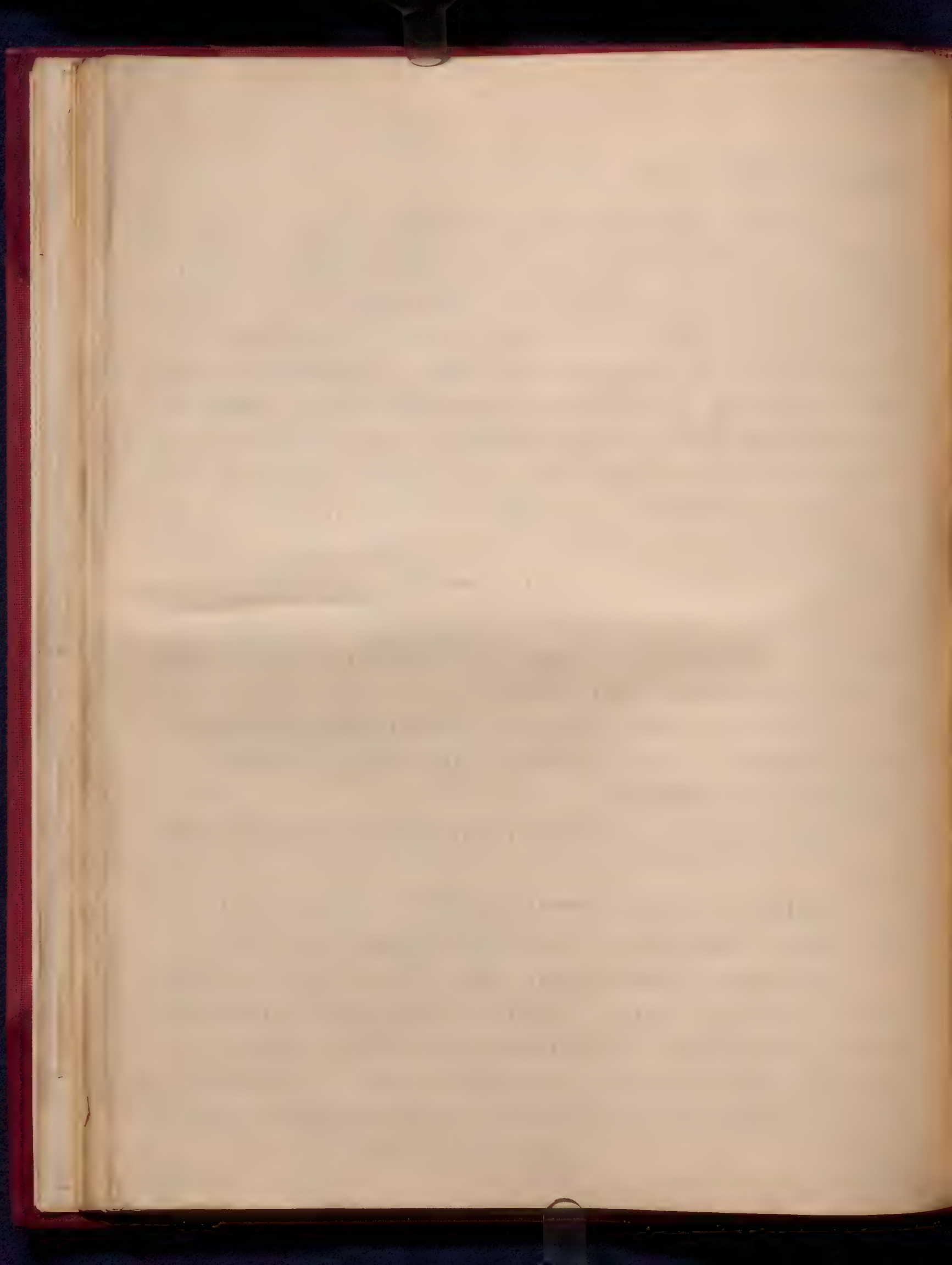
"I swear by Apollo the physician and Aesculapius and Health (Hygeia) and All-Heal (Panacea) and all the gods and goddesses, that, according to my ability and judgement, I will keep this oath and this stipulation -- to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgement, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous.

I will give no deadly medicine to anyone if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion.

With purity and with holiness I will pass my life and practise my art.

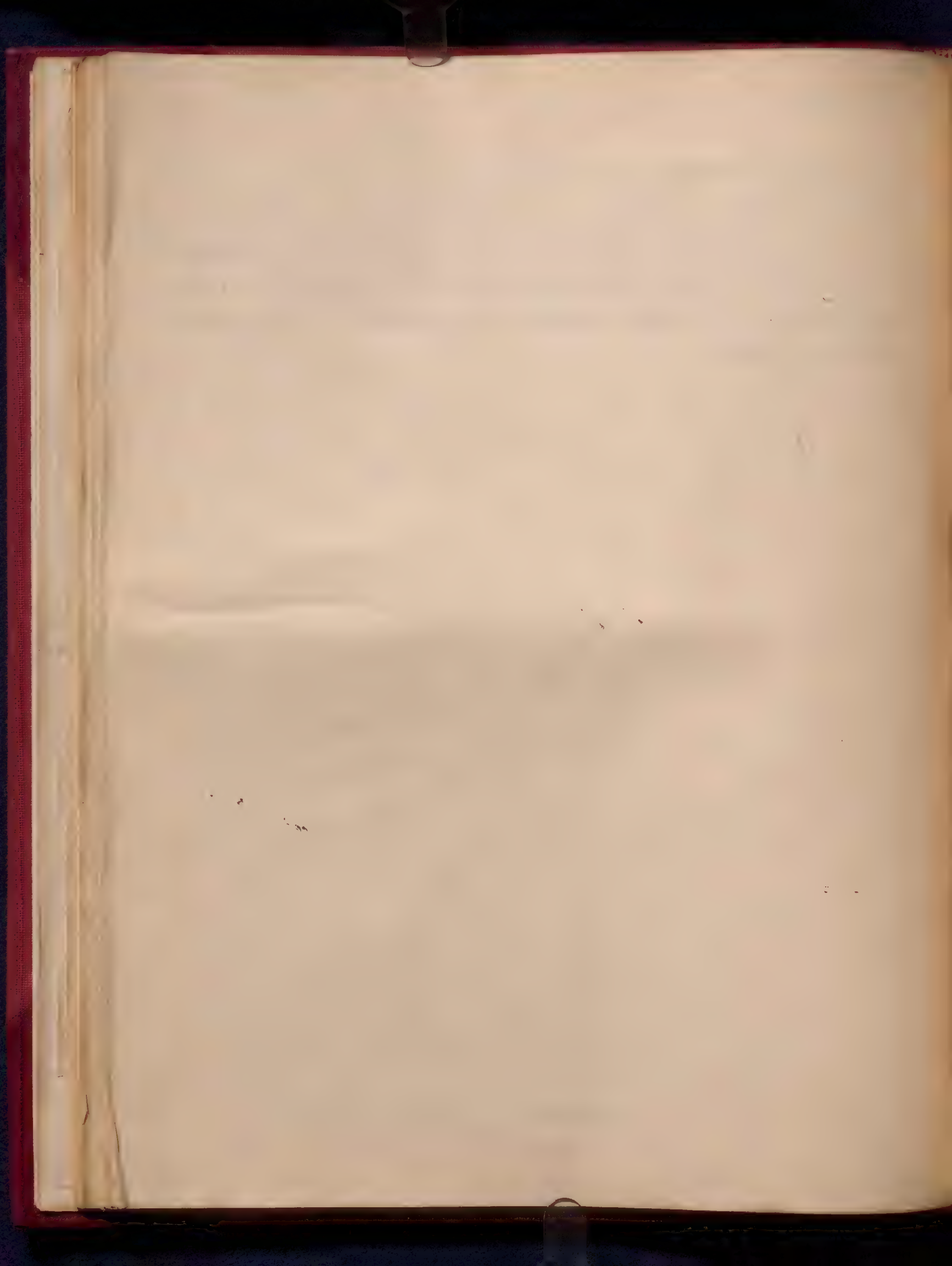
I will not cut persons labouring under the stone, but will leave this to be done by men who are practitioners of this work.

Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from, and will abstain from every voluntary act of mischief and corruption, and, further, from the abduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice, or not in connection with it,



see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times ! But should I trespass and violate this oath, may the reverse be my lot!"

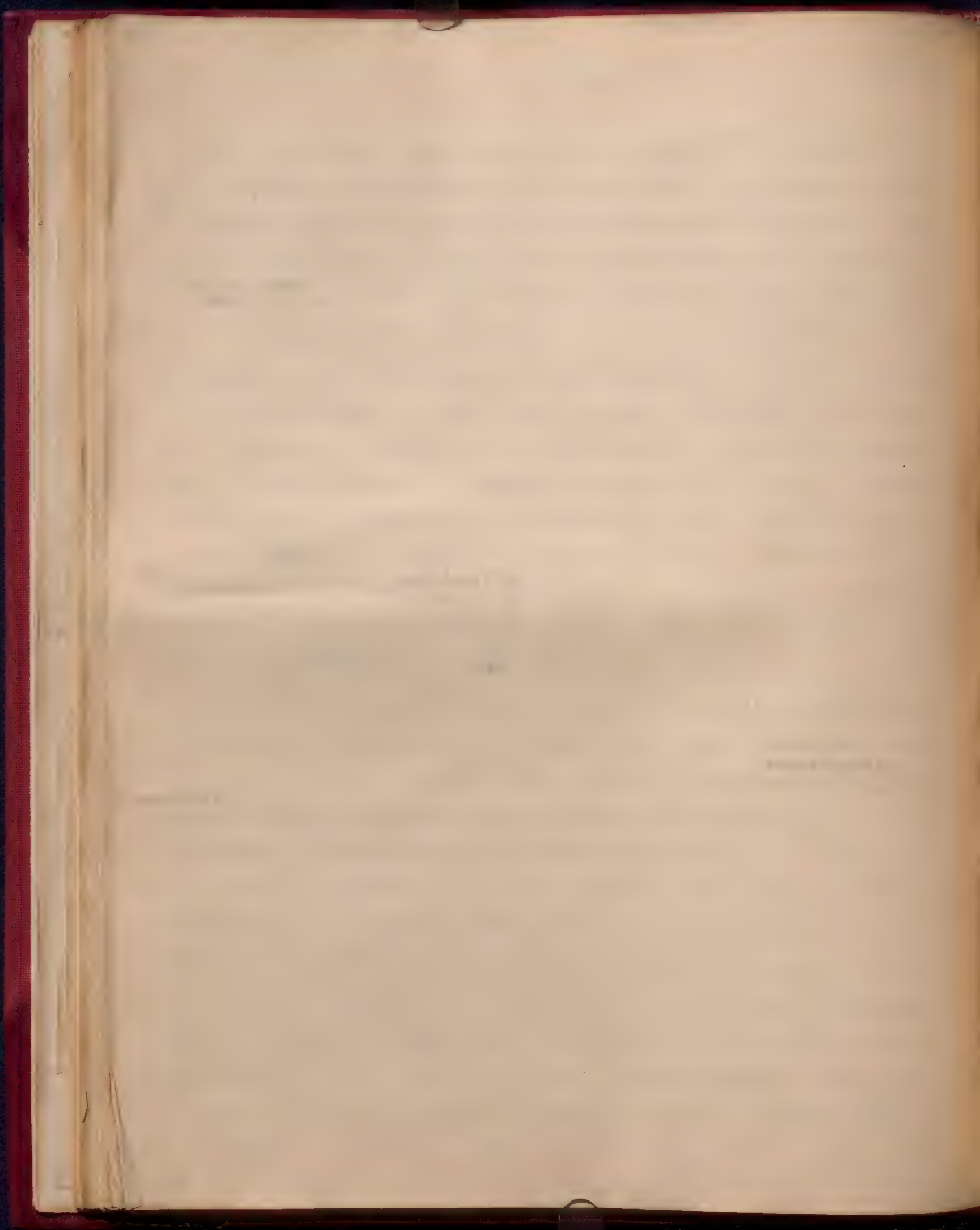


In Athens the picture we have of the social condition of the physician shows him to have been a cultivated gentleman, mixed in the best, if not always the soberest society. Plato put the physician low enough in his ideal Republic, in the lowest stratum, indeed, but he has never been more agreeably placed than in the picture of ^{Plato's} ~~real~~ ^{Acumenus} life as given in the Symposium, in which Eryximachus, the son of Acumenus (himself a physician) plays a typical Greek part, as strong advocate of temperance in mind and body. At the outset, claiming for himself a weak head, he urged moderation in drinking, a practice which as a physician he reprobated strongly. Whether it was the deep notions of the day before from which many of them had not yet recovered, or whether it was the example of Thaedrus, who promptly took the advice of Eryximachus, conversation ^{not drinking} ~~was~~ made the order of the day, and he had the honour too of naming the subject -- praise of the god of love. You remember that when the turn of Aristophanes came he had the hiccough (which is strongly suggestive of deep potations on his part): Eryximachus had both to cure him and to take his turn, and the ^{recommended} cures are good, sensible and still efficacious.

And let me conclude with one or two extracts from ^{Eryximachus} ~~the~~ ^{the} ~~speech~~ which shows him to have been a student of the great Sicilian philosopher

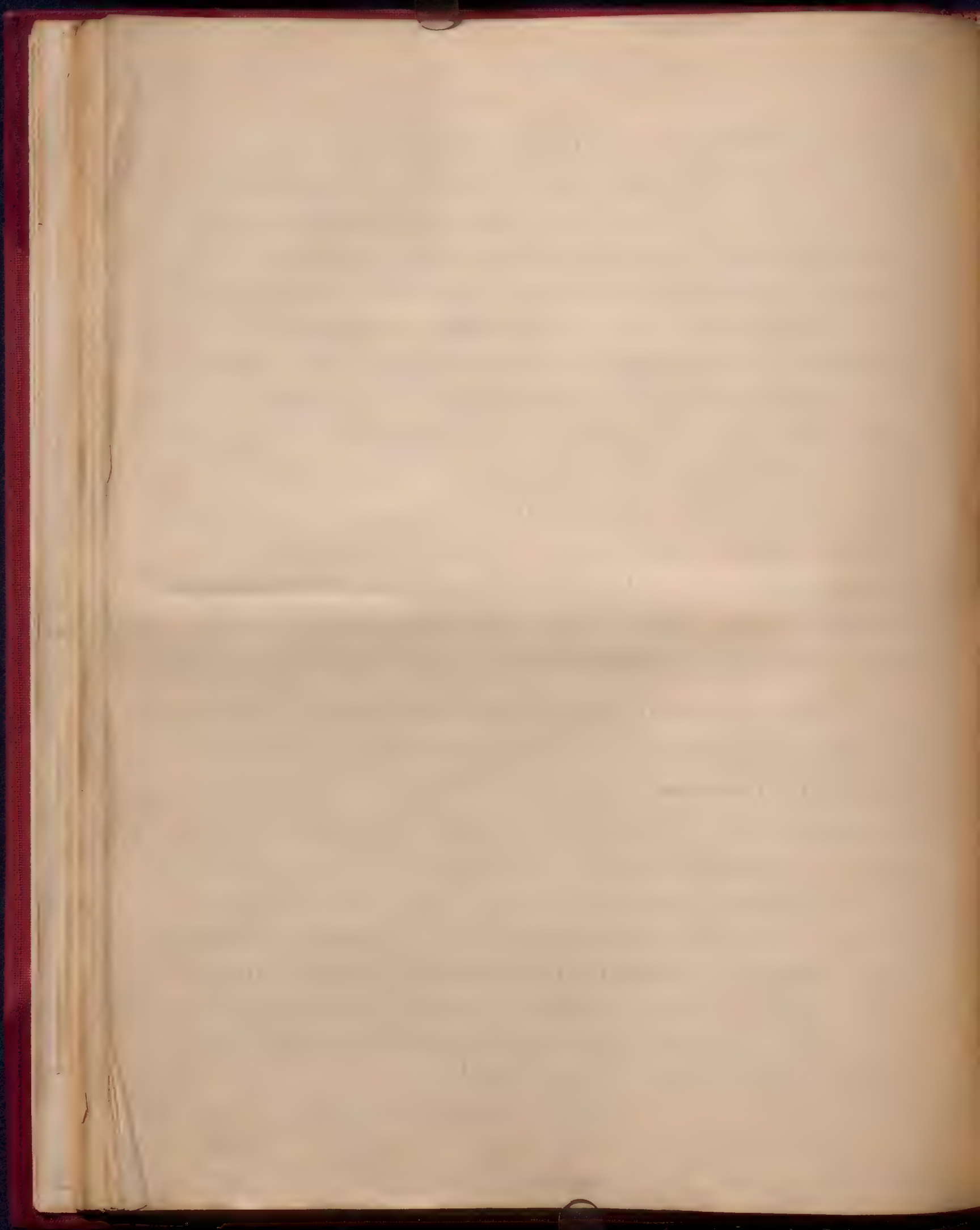
"And from medicine I will begin that I may do honour to my art. There are in the human body these two kinds of love, which are confessedly different and unlike, and being unlike, they have loves and desires which are unlike; and the desire of the healthy is one, and the desire of the diseased is another; and as Pausanias was just now saying that to indulge good men is honourable, and bad men dishonourable: so too in the body the good and the healthy elements are to be indulged,

and

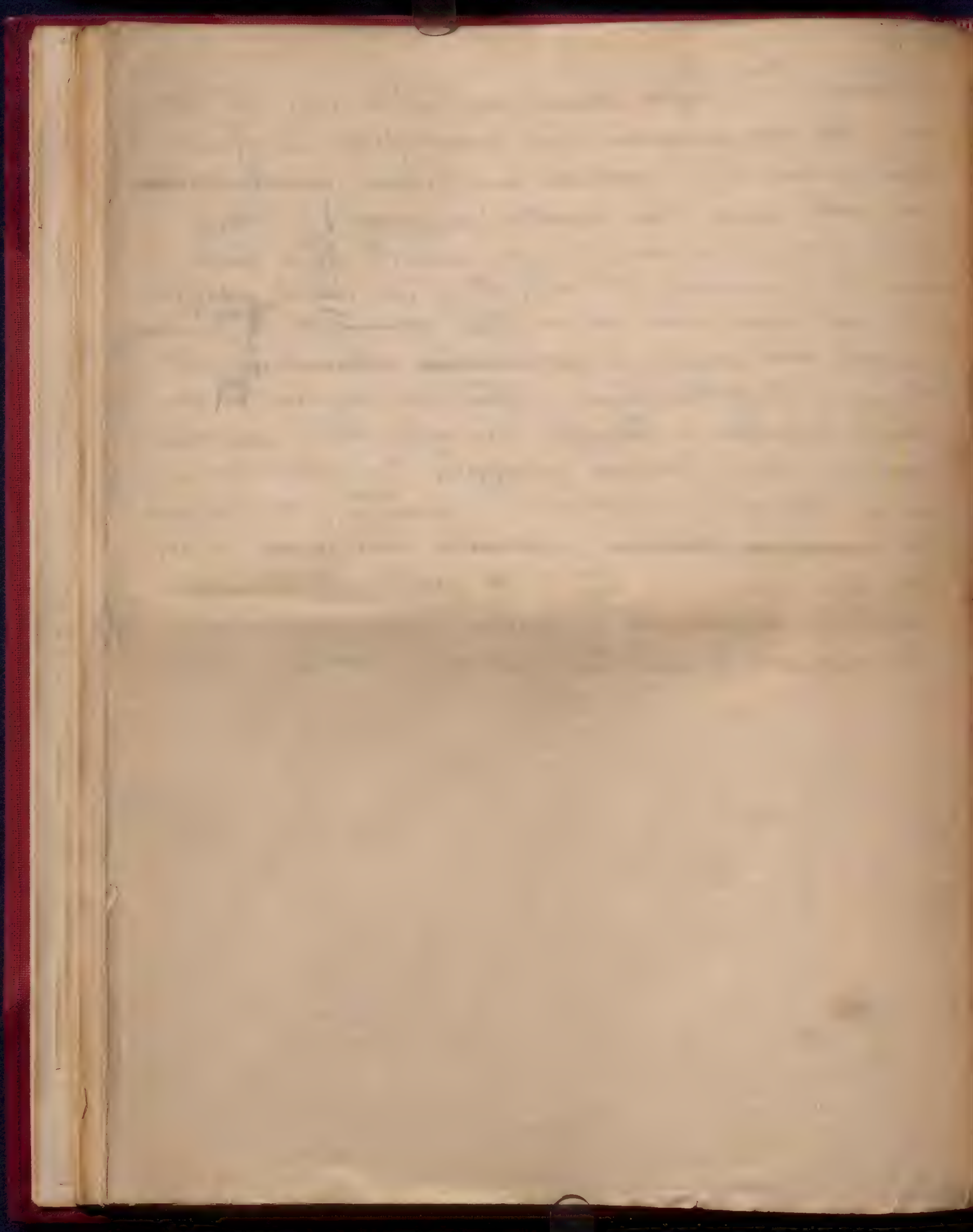


and the bad elements and the elements of disease are not to be indulged, but discouraged. And this is what the physician has to do, and in this the art of medicine consists: for medicine may be regarded generally as the knowledge of the loves and desires of the body, and how to satisfy them or not; and the best physician is he who is able to separate fair love from foul, or to convert one into the other; and he who knows how to eradicate and how to implant love, whichever is required, and can reconcile the most hostile elements in the constitution and make them loving friends, is a skilful practitioner. Now the most hostile are the most opposite, such as hot and cold, bitter and sweet, moist and dry, and the like. And my ancestor, Asclepius, knowing how to implant friendship and accord in these elements, was the creator of our art, as our friends the poets here tell us, and I believe them: and not only medicine in every branch, but the arts of gymnastic and husbandry are under his dominion."

"Then the old tale has to be repeated of fair and heavenly love - the love of Urania the fair and heavenly muse, and of the duty of accepting the temperate, and those who are as yet intemperate only that they may become temperate, and of preserving their love; and again, of the vulgar Polyhymnia, who must be used with circumspection that the pleasure be enjoyed, but may not generate licentiousness; just as in my own art it is a great matter so to regulate the desires of the epicure that he may gratify his tastes without the attendant evil of disease. Whence I infer that in music, in medicine, in all other things human as well as divine, both loves ought to be noted as far as may be, for they are both present."

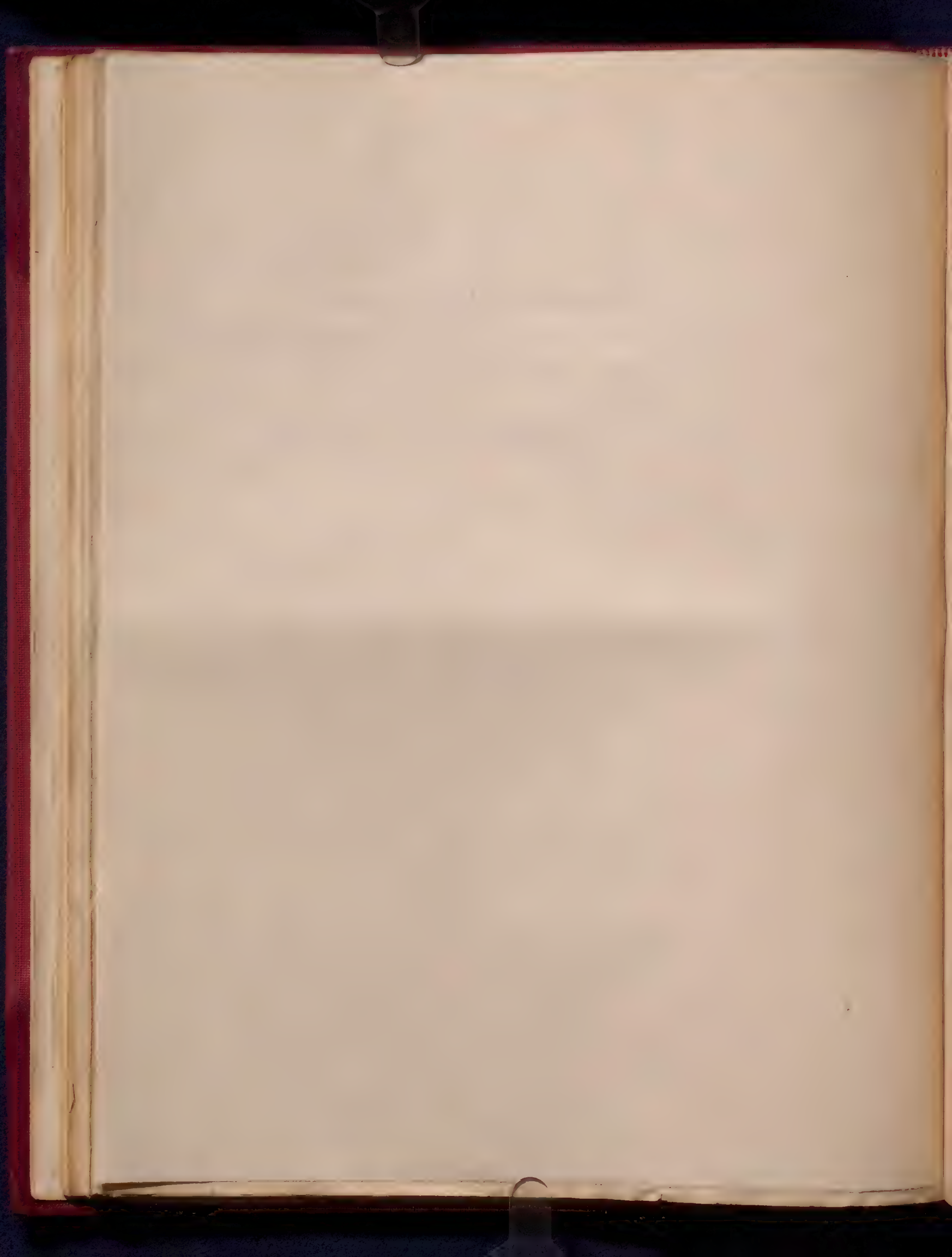


we physicians, ^{may} justly claim part in 'the glory that was
greece!'. No other profession can boast of the same un-
broken continuity of methods and of ideals. ~~Schools & systems~~
we are justly proud of our apostolic succession. Schools &
systems have flourished and gone, schools which have
swayed for generations the thought of our guild, and sys-
tems that have died before their founders; ^{medically} the philosophy
of one age has become the foolishness and absurdity of the
next, and the foolishness of today has become the wis-
dom of tomorrow - through long ages which were slowly
leaving what we are hurrying to forget - amid
all the changes and chances of twenty five centuries
the ~~profession~~ ^{medical} profession has never lacked
men who have lived up to the great ideals - the
ideals of Hippocrates, of Galen, of the men of the
Renaissance; and they are ours today.



"Specialists and Specialism
Remarks at the opening of the Ophthalmological Congress,
Oxford, July 22nd 1910"

endorsed in Sir William's hand "never published W. O."



OPHTHALMIS AND STRABISMUS.

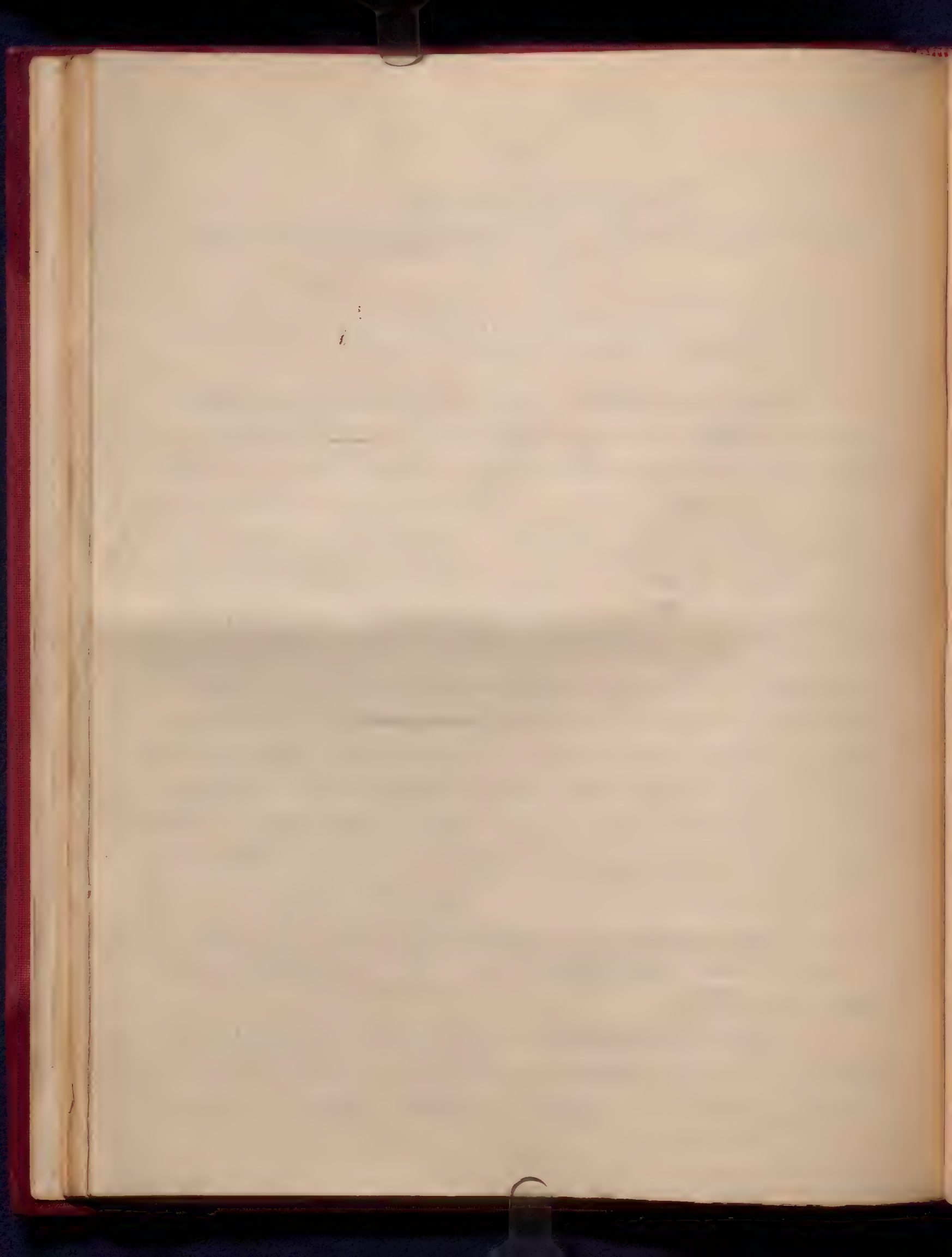
Remarks at the opening of the Ophthalmological Congress, Oxford
July 22nd, 1910.

by

WILLIAM COLLIER M.D., F.R.S.
Regius Professor of Medicine, Oxford.

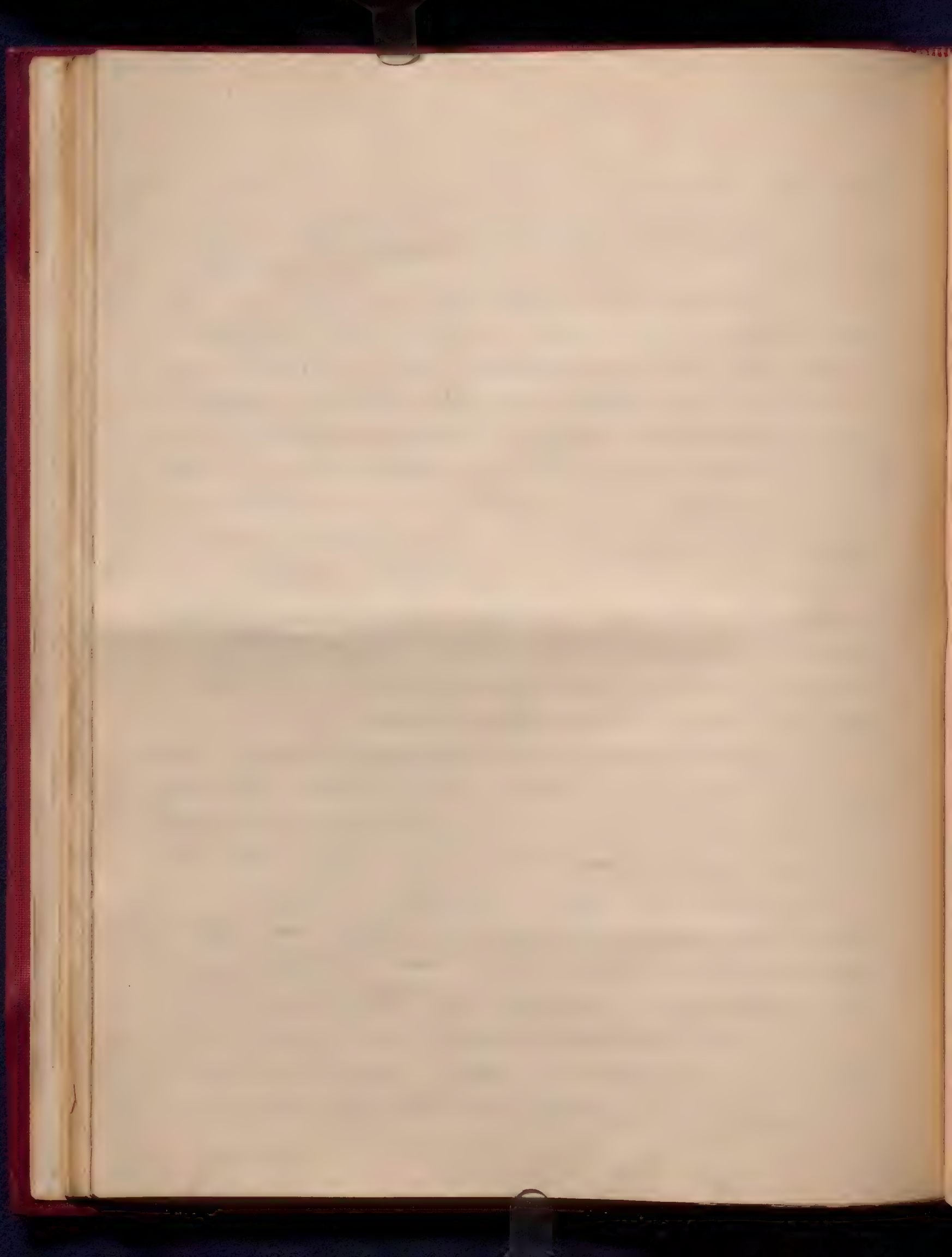
In this ancient seat of learning, one of the oldest medical schools in Europe, it is most appropriate that ~~this~~ the youngest of professional congresses should assemble, and in the name of my colleagues I bid you hearty welcome. This new departure is the outcome of the instructive gatherings which have been held here annually since it was thought desirable to organize in such a way as to give permanency and continuity to ^{an} ~~this~~ effort to bring together in a congress, men interested in the subject of ophthalmology. Those of us who have had the privilege of attending previous meetings have been impressed with the stimulating character of the work ~~accomplished~~. We have been honoured by the presence of many of the most distinguished teachers of Europe, scores of practitioners have benefited by their lectures and demonstrations, and the specialists themselves have engaged in the ever needful task of wiping their own glasses. We are all deeply grateful to Mr. Boyne through whose persistent energy Oxford has taken a distinguished place as a centre for ophthalmological study, and it must be a source of great satisfaction to him to feel that his efforts have been so successful.

Through his exertions too, and as tribute to the confidence reposed in him by his colleagues, the University of Oxford has established, for the first time in our profession, a diploma in ophthalmology.

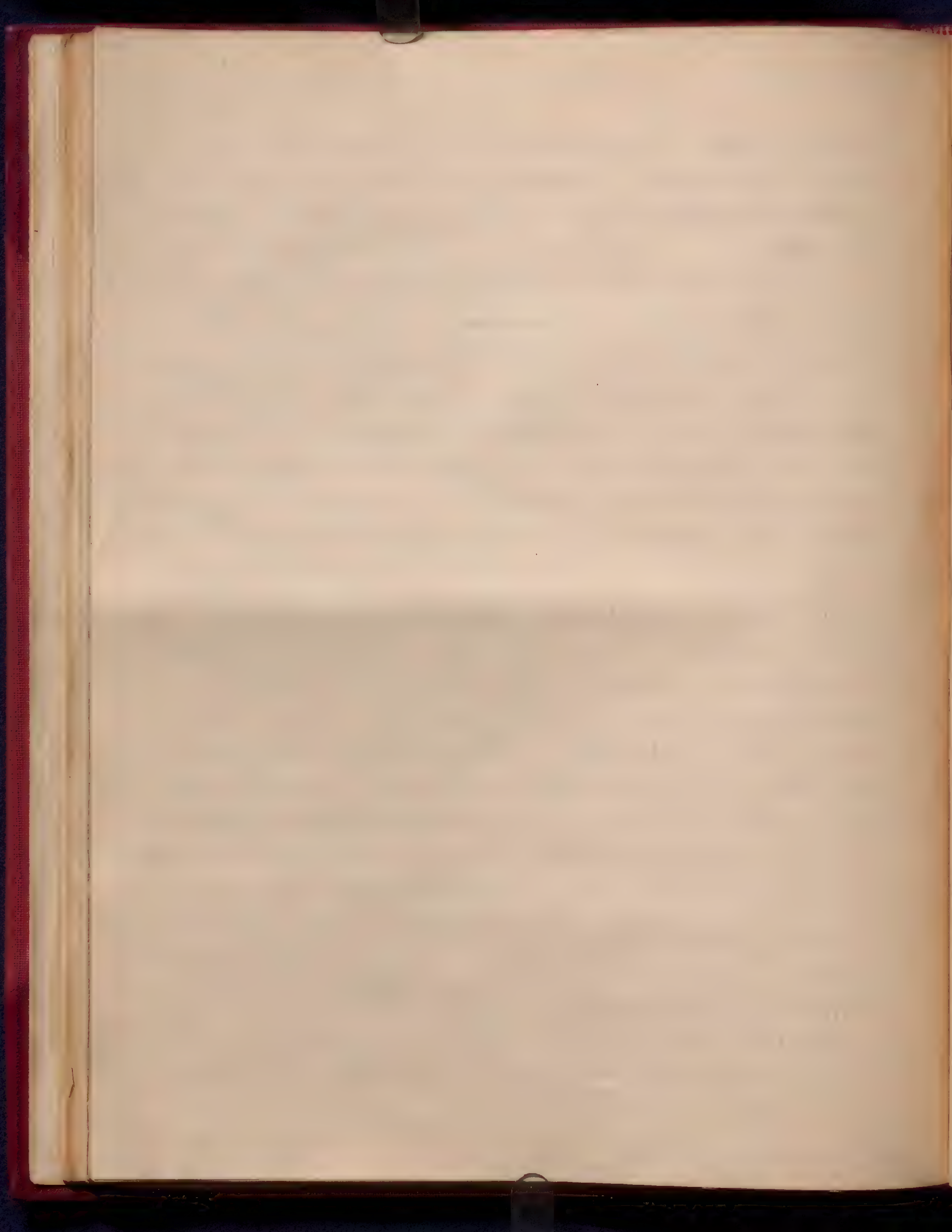


General Biology, and this affords us a text for a few remarks on the position of specialists and specialism at the present day. To two great groups of mind the world has been divided for its progress -- the eurytropic, the wide visioned men of the type of Aristotle, Darwin and Spencer; and the agnostic -- the men of concentrated, penetrating vision of the type Pythagoras, Vesalius, Harvey and Pasteur. The small ear which is the more important? -- the one has furnished the grand design and directed the plan of the temple of science; the other has not only manufactured the bricks and dressed the stones, but has designed the machinery for their erection. In every department of knowledge it is the specialists who have made progress possible, and curiously enough to those who have loved knowledge for its own sake has come the greatest measure of success. Many a one has worked patiently, little dreaming that his rough hewn block would serve as a key-stone of an arch, or become a polished corner in part of the temple, and he slips far removed from his work-shop.

It is the far visioned men who pick up the other fellows' bricks, seeing just where they fit, bring in this way the work of their people colleagues. To and again an eurytropic genius arises to whose perfect mental sight the parts are not less clear than the whole. Such a one was Helmholtz, arm surgeon, physiologist and physicist, whose discovery of the ophthalmoscope could never have been made without that profound knowledge of optics, the lack of which caused his friend Brücke to miss it by a hairs-breadth. To interweave are the strands in the loom of science that at any moment the thread of the humblest worker may serve to complete the pattern. The specialists in chemistry and physics have made possible the greatest modern advances in

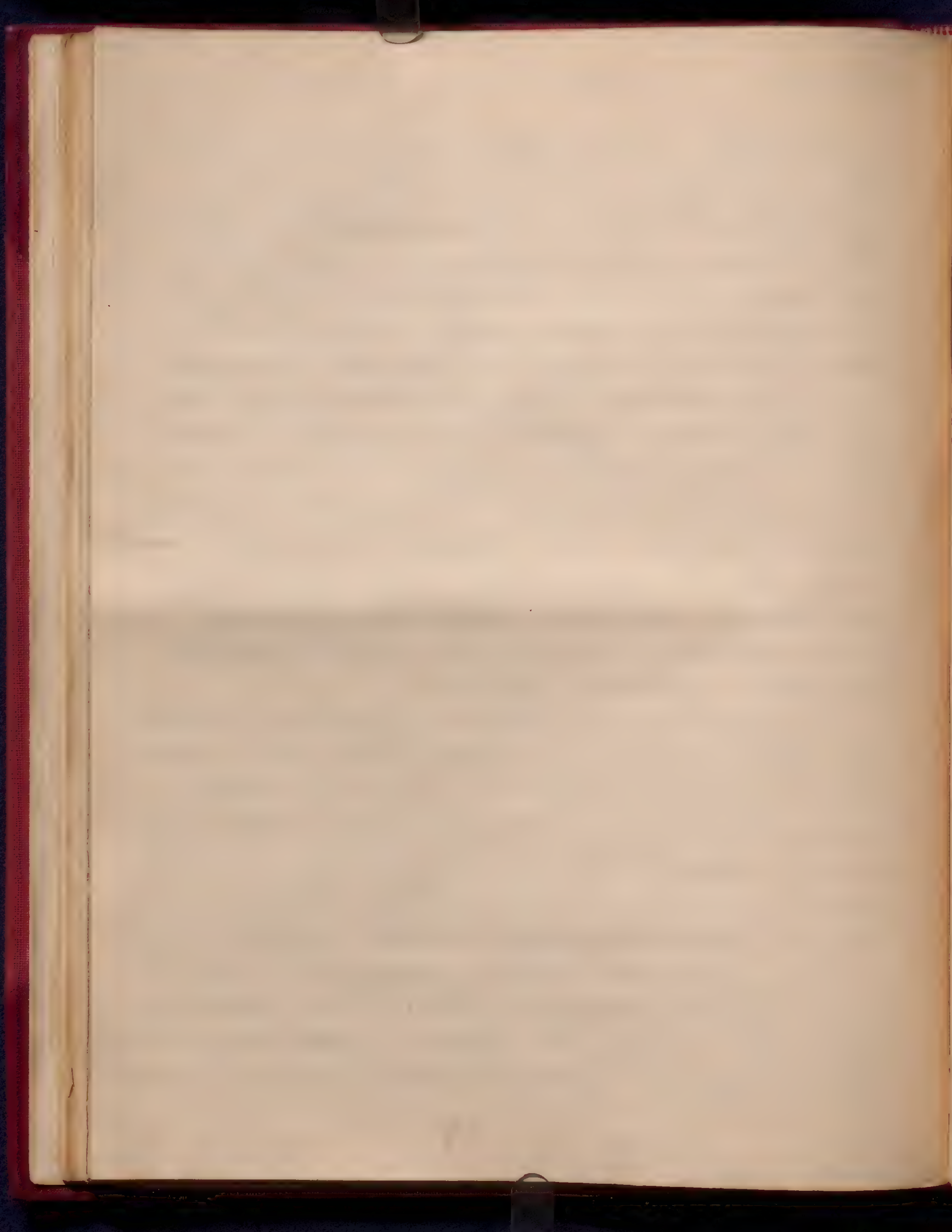


medicine. Perken and the men who gave us the aniline eyes had no thought of bacteriology. Had *Faraday* lived in the 15th century the motor would have been possible, and Leonardo da Vinci might have made his flight from. The student may be working today in some physiological or chemical laboratory who will make possible the discovery of the cause of cancer. Science is specialism. Those who think that at the present day specialism has run riot are part-time critics who cannot see that we are safe so long as each generation in each department produces a few men with hypermetropia enough to synthesize the work of their colleagues, and so far these have never been wanting. But the medical profession has become a mere congeries of specialists and upon you is the blame! In the forest of general practice you ^{first} blazed the way, and a good one too, which others have been ready enough to follow. Not that ophthalmic specialists are new -- contrariwise they flourished in Egypt and Greece, and indeed in every age of the profession, but you took the lead in showing how a special branch of medicine should be studied, practised and made successful. It is a far cry from the days of ¹⁵genial Pepys, ^{in the 17th century} who tells how the eye doctor, whom we all execrate as the man who made him stop writing the immortal Diary, had never seen an eye dissected until he visited Lower at Oxford in 1670 for one great work we are thankful to you -- breaking down the barriers of prejudice which existed in the profession, against any one man knowing any one thing better than his fellows. It was a hard fight, and you may think it not yet a fight to the finish, as there remain a few who diffuse an atmosphere of the glacial period in the presence of a specialist. Shades of Frost! Think of the contrast even within the memory of these the general surgeons who practised bacteriology

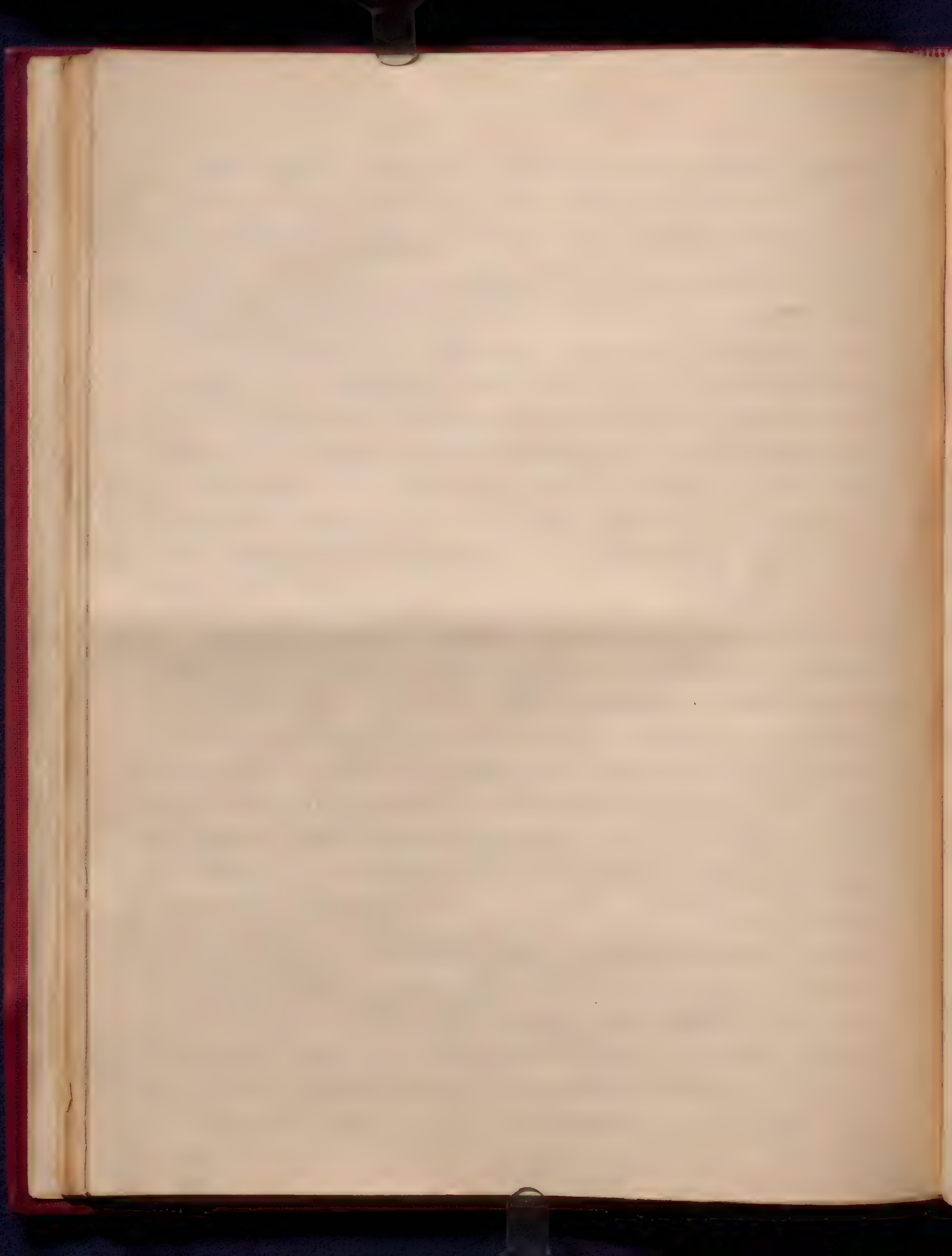


and the specialist who today practices orthopedic surgery. I still
smile at the remembrance of those "good old days" at the Montreal
General Hospital, when cases of gonorrhea, fractured legs and starr-
-act were jammed in the same ward, under the care of the same man;
and it was not without qualms of conscience that the staff consented
to the appointment of an ophthalmic surgeon, my friend the late Dr.
Buller. When I studied at Moorfields in 1872 Bowman and Writchett
were the only men who did not hold surgical positions in other hospit-
-als. We all recognize how much the science is indebted to general
surgeons who have made ophthalmology a study, and to all of us at once
will occur the name of that veteran -- the greatest generalized special-
-ist of his generation -- Jonathan Hutchinson, the last of the polymaths
the man at home in all spheres of medical science. Now will be found
now to lament the change, and fewer perhaps who do not feel that it
would have been better to recognize earlier the pressing demands of
specialism in a subject of such complexity.

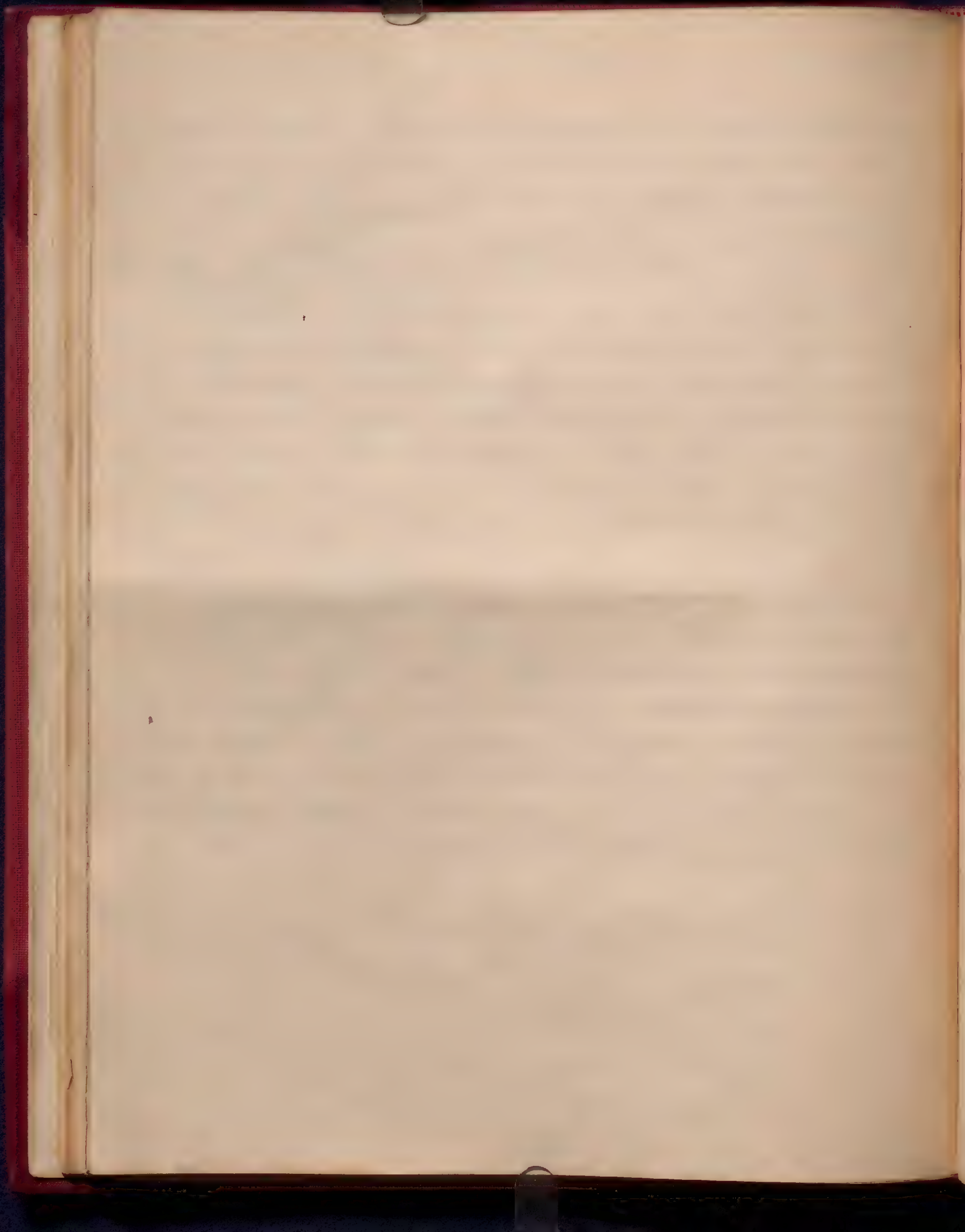
The feeling against specialists in the profession is not unrea-
-al. For generations the man who professed to know more of a subject
than his fellows was not content to let the public find this out for
themselves, but he proclaimed it from the newspapers, or from the back
of a van. Too often he illustrated what Johnson said of the Chevalier
Taylor "how far impudence will carry ignorance"; and cracks of his
type gave a black eye to specialism. The group of Borderland men have
had an even more disastrous influence, men still within the ranks, who
possessed by one idea, rode a hobby in practice until it becomes hope-
-less quackery. A change in the latitude or longitude of the glandular
epinloicae, dilatation of the internal Thetesi, obliquity of the fibres



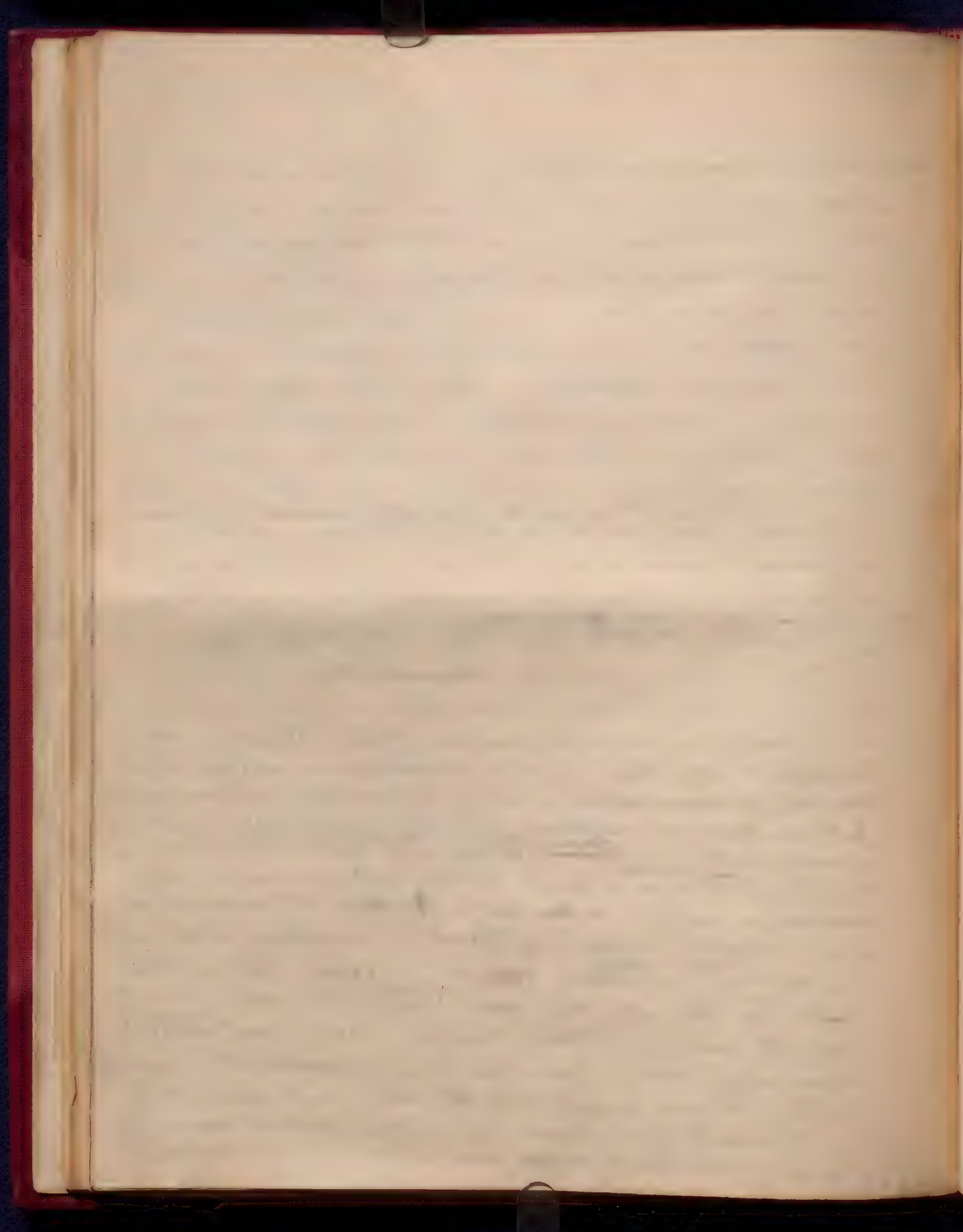
of Muller, anything will do so long as it catches the public eye. Upon some of them the obsession is a strong delusion, and by a sort of hypnotism they come to believe the lie; others are everyday chart-balers from whom we cannot hope to escape. A potent cause of hostility is ~~an~~ childish feeling of resentment that others should profess to know much more of a subject, with a total lack of appreciation of the inestimable value of the well trained specialist. The casual observer laments the tendency of men to limit more and more their practice in small fields, and there has been a partition of the body from head to foot -- eye, ear and throat, nose, skin, and joints, teeth, lungs, heart, stomach, liver, and blood, rectum, pelvis and genitalia, all with their special literature, special societies and ardent students. The physician, the surgeon and the general practitioner feels, so to speak, very much out of it, and yet it is safe to say that they have benefited enormously in the levelling up of our knowledge by the contributions of our people brethren. Think what the gynecologists have taught the surgeons! What a debt we physicians owe to the surgeons! And every general practitioner in the land is a better practitioner for the lessons he has learned from the specialists. And the casual observer who looks a little closer will see signs of a reaction. The gynecologist of today scarcely knows whether he is a physician or a surgeon, so mixed is his practice, and so complex his affiliations. Neurology is another medico-surgical speciality in which many of its most advanced practitioners treat neurasthenia as readily as brain tumours. The cleavage between medicine and surgery is no longer wide and deep, and not a few begin to feel that the mandate of the physician might just as well be carried out by his own hands as by those of another. There is a delightful story of Hegan, Louis XIV's physician, who



had to be cut free stone by the celebrated Haraokai. After the operation, which Iagan bore with great fortitude the surgeon ventured to give directions as to diet, the chief his doctor turned to him and said "J'ai eu besoin de votre main, mais je n'ai pas besoin de votre tête". Not only is this day long past, but we may look forward confidently to the time when at the top of the profession, and through the body at large the distinction between the physician and the surgeon will be so diminished that the colleges will unite as corporations as they have already done as examining bodies. And in another way generalism will find its level. The general practitioner is often loud in his complaint that the butter of his bread is pilched by the specialist, but in great part that is his own fault. There is much work to do if he will only fit himself for it. Fortunately the new regulations of the Government will drive him to the post-graduate schools to learn how to treat eyes, ears and throats of school children, as a great deal of the routine of this practice must be done by him. The most delectable operation for a generalist ever saw was by a country doctor. When the clinical laboratory is regarded as essential in a modern practitioner's pharmacy, the general practitioner will find that in the cultivation of the scientific side of his work will be found a strong corrective of many of the worst ills against which he has to contend.

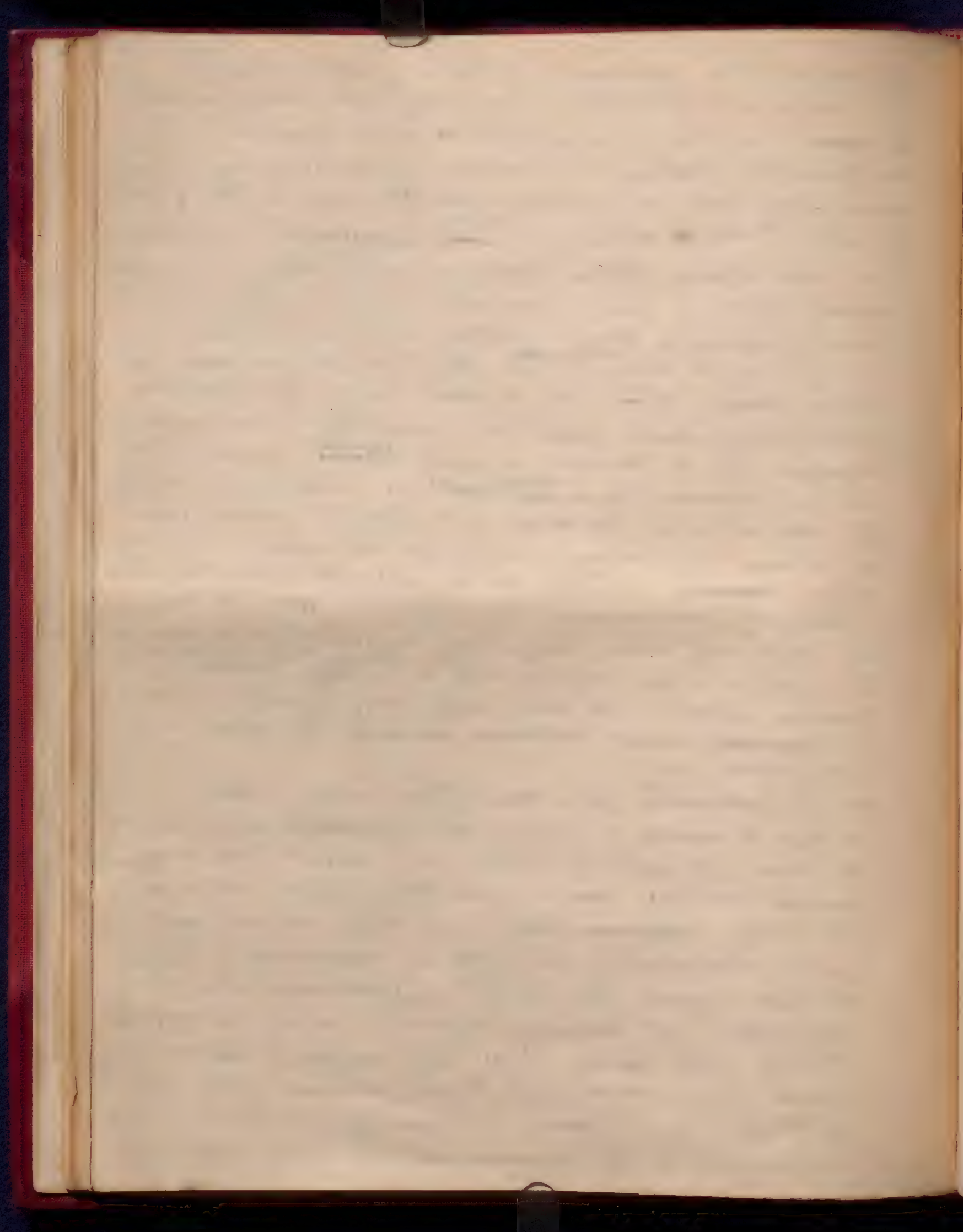


Meanwhile we have ~~got~~ to face ^{an} increase of specialism in the profes-
~~sion~~, accept it, and guide it into proper channels. The great
 safeguard is to give men an education which will support any type
 or specialized structure which may subsequently be put upon it.
 One great difficulty is that we try to make specialists of our med-
 ical students, upon whom the examiners shower questions in a score
 of highly specialized departments. Within the short space of five
 years he has to satisfy experts everyone of whom looks at his subject
 from the stand-point of a specialist. This cannot but encourage
 cramming and superficiality, and men drift off early into specialists.
 Ophthalmologists represent an Corps d'élite of specialists in the profession
 for the study of which they are not properly prepared. You have
 the advantage of working at the affections of an organ in whose mar-
 vellous beauty and structure every department of science is concerned
 Among branches of special practice ophthalmology is
~~the~~ all specialists you should stand on the widest basis that makes
 your position unique, so wide indeed that in ~~your~~ ^{your} mental
 sciences, mathematics, physics and biology join in your every day
 work, and yet a man becomes an ophthalmic surgeon in a
 haphazard way, and there is often ^a serious danger in the
 attempt to manufacture a highly complex structure from un-
 fit & unseasoned material. The University of Oxford has made
 a new departure in ^{offering a diploma in Ophthalmology for} ~~admitting~~ men who wish to practice in this
 department ^{and who have} ~~—~~ taken a special course of study in physics, phys-
 ics, anatomy & hospital, ~~and~~ work. Degrees in the University nor
 in the profession are such certificates of competency unknown.
 Ten Diplomas ^{in special subjects} are already granted at Oxford; that in Public
 Health was the first, 1893. And I think the feeling is ^{not only} ~~very~~
 distinctly favorable to them. They have been a great service
 stimulating study in particular branches and ~~in~~ ^{not only} but in system-
 atizing it and bringing out the strong and weak points
 in the general curriculum. It was not without searching
 of heart that this new one was established. In Medicine



there was only the precedent of Public Health but everyone
acknowledges that this diploma has proved ^{to be} the greatest service to
~~the public~~. The danger seemed to lie in the direction of the
multiplication of diplomas in all sorts of subjects and that we
would soon have in addition to the D.Ph. and the D.O., ~~the D.S.~~
~~and D.A.~~ D.N. ~~etc~~ stamping a ^{score} of specialists in the disease
of many organs. Of this I do not think there is any danger.
Logically it may be said - you give a man a diploma for
special knowledge in ~~business~~ ^{business} ~~the eye~~, why not in disorders of the
prostate but I think ^{in this matter} we may trust to the good sense of the
fitness of things both in the profession and in the University.
That Ophthalmology stands apart as a specialty is universally
recognized, and the demand for highly ^{qualified} ~~trained~~ men in the field
is on the increase. ^{a glance at} ~~your work~~ the papers of the examina-
tion now in progress you show how wide is the ground covered
and a man who prepares himself for this diploma has had
a good ~~training~~ ^{training} for his life work. The other branch
of medicine needs similar encouragement from the University
and qualifying bodies - psychology. No man should be appointed
to a position in an asylum with ^{just a diploma showing that he has had} a ~~thorough~~ education in the
modern methods of the study & treatment of mental diseases
and ~~nothing would contribute more to this reform will~~
come before long.

In the cultivation of a specialty as an art - there is a
tendency to develop a narrow and pedantic spirit and
the man who year in & year out corrects errors of refraction
removes prostates ~~and~~ or takes blood pressures without regard
to the wider ~~influence~~ basis upon which his art rests
is apt to be insensibility, but none the less surely, to ^{reach} ~~get~~ the
attitude of mind of the old Scotch shoemaker who, in
response to the Dominies suggestion about the weightier
matters of life asked "D ye ken leather?" But every
special branch carries with it the correction of the most
fatal tendency. Problems in physiology & pathology and
at every point the commonest affection & exercised



7

in them, if only in the earlier years of professional life, a man is chastened, so to speak, and can never escape the deadening effect of routine. The other radical defect of specialism is a failure to recognize that ~~the results~~ ^{it deals as a rule with} ~~are only~~ partial truths which must be correlated with facts obtained by wider study. The various organs, the diseases of which are subdivided for convenience of treatment, are not isolated but complex parts of a complex whole, & every day experience brings home the truth of the saying "when one member suffers all the members suffer with it". Plato must have discussed this very problem with his bright friends in the profession, or he never could have put these ~~following~~ ^{wise} words into the mouth of Socrates - "I dare say, you have heard eminent physicians say to a patient who comes to them with bad eyes that they cannot cure the eyes by themselves but that if his eyes are to be cured his head must be treated; and then again they say that to think of curing the head alone and not the rest of the body is the height of folly. And arguing in this way they apply their methods to the whole body and treat and heal the whole and the part together. Did you ever observe that this is what they say?" - It has always seemed to me that these words of Plato embody the law & the gospel for specialists.

Wm. H. H. H.

THE FIRST AND LAST ABBOTS OF READING.

Let me offer congratulations to this
old town in the possession of a romance which
appeals to all lovers of antiquity. In your
modern prosperity the outside world may never
know or lightly forget the glorious history of
foundations now almost lost.

ch',

d,

"The First and Last Abbots of Reading"

[read in the Chapter House of Reading Abbey, July 10th
1911 — when Sir William Boleyn unveiled the
memorials. This address was published in
a very full abstract in the Reading Standard
of 15th July 1911.]

Printed by the Reading Standard

able

the Capital

THE FIRST AND LAST ABBOTS OF READING.

Let me offer congratulations to this old town in the possession of a romance which appeals to all lovers of antiquity. In your modern prosperity the outside world may never know or lightly forget the glorious history of foundations, now alas! in ruins, which once made Reading the rival of Glastonbury, St. Albans and Osney. Their noble remains you devoutly preserve, and through the pious inspiration of one of your townsmen, Dr. Hurry, we enshrine today the memory of the first and last of the long line of men, who ^{for} ~~through~~ four hundred years ruled the destinies of one of the most famous abbeys of England. You see here in stone symbolized the beginning and the end of a great epoch, a vast movement to the strength of which our wonderful cathedrals and many superb ruins bear an enduring testimony. Marvellous, ^{indeed} was the faith that found expression in such works! Small wonder that

upon the head of King Henry, but they were both mere pawns in the great game which man has for ever to play with the enslavers of his spirit. The one lost ~~in the game~~ a beautiful abbey and his life, the other in losing a reputation, saved a nation, and struck off for ever from this land the galling fetters of foreign ^{domination} and ecclesiastical dictation.

13, NORHAM GARDENS,
OXFORD.

Such as we deplore the savagery, the injustice,
 the brutalities associated with the Reformation,
 into the other balance must be thrown two great
 victories -- the appeal to reason, and the birth
 of the spirit of nationality, -- precious gifts,
 worthy of a costly sacrifice. Still at work,

the 13th has been called the greatest of the
 centuries, since in it the larger number of these
 magnificent foundations took their rise. Little
 could the first Hugh, even amid the vicissitudes
 of a long and stormy life, have dreamt of the
 tragedy that awaited his splendid home and successor,
 a tragedy that stirs us to the quick in the pages
 of the Abbé Gasquet, or in the brief memorial
 printed for this occasion. But, like an earthquake
 the upheaval to which this ruin testifies was the
 outcome of natural causes, not always easy to trace
 in the tangled web of history. We pity the fate
 of Abbot Hugh Farrington, and you may call down curses
 upon the head of King Henry, but they were both
 mere pawns in the great game which man has for ever
 to play with the enslavers of his spirit. The
 one lost ~~in the game~~ a beautiful abbey and his life,
 the other in losing a reputation, saved a nation,
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 the brutalities associated with the Reformation,
 into the other balance must be thrown two great
 victories -- the appeal to reason, and the birth
 of the spirit of nationality, -- precious gifts,
 worthy of a costly sacrifice. Still at work,
 the forces which four centuries ago were relentless
 enough to wreck this abbey and to outcher its head,
 have slowly but surely so moulded man anew, that he
 looks on life with new eyes. Even those who regret
 most acutely the changing of the old order rejoice
 in a new spirit abroad in the world that has given
 the individual, whether child, man or woman, a value
 never before possessed. The recognition of the
 right to live and ^{to} be happy and healthy in this
 beautiful world is its fruit. But this and much
 more is the work of the past, of which we are the
 inheritors, and it is from this past we may draw
 our keenest inspiration and our surest ensamples.
 And the lesson is not in what a man has believed,
 but

of those of our ancestors who loved the light
 rather than darkness. To reverence their memory
 is best inspiration for the ^{our} day's work. We need
 their help, and it is just through such memorials
 as Dr. Murray has here erected that their benign
 influence may touch us. As always Kipling gets
 to the marrow of the thing in his splendid poem

"Our

15
 Table

13, NORHAM GARDENS,
OXFORD.

5

"Our fathers of old" : --

If it be certain, as Galen says
And sage Hippocrates holds as much :
'That those afflicted by doubts and dismays
Are mightily helped by a dead man's touch',
Then, be good to us, stars above !
Then, be good to us, herbs below !
We are afflicted by what we can prove;
We are distracted by what we know -
So - ah so !

Down from your heaven or up from your underworld,

but in how he has behaved. Who cares a fig
whether Abbot Hugh Farrindon assented or not to
the King's supremacy. - the lesson for us is in
his blameless life and brave death, - in them we
find what the poet calls "the touch divine of noble
natures gone". Consciously or unconsciously,
everyone looking on this last scene in which the
last abbot stands at the foot of the gallows with
a rope round his neck, will in his heart make an
obeissance to the man who stuck to his principles
even unto death, - and in so doing will gain strength
for life's daily battle. That we live in a better
and a happier world is the outcome of the struggle
of those of our ancestors who loved the light
rather than darkness. To reverence their memory
is best inspiration for the ^{our} day's work. We need
their help, and it is just through such memorials
as Dr. Hurry has here erected that their benign
influence may touch us. As always, Kipling gets
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13, NORHAM GARDENS,
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 Then, be good to us, herbs below !
 We are afflicted by what we can prove;
 We are distracted by what we know -
 So - ah so !

Down from your heaven or up from your mould,
 Send us the hearts of our fathers of old!

student - the Professor's devotion
 - Peace among the Professors, devotion
 to the seniors
 to your chief - no cabals, no
 no back-stair work - everything
 and, small dealings, all the cards on the table

13, NORHAM GARDENS,
OXFORD.

Remarks made at the
Court Dinner, University of Sheffield
Nov. 19th 1913.

[not published]

students. No calomel, no
- Peace among the Professors; devotion
is to the seniors
to your chief - no cabals, no
no back-stair work - everything
and, small dealings, all the cards on the table



many grimes who made ^{himself} this age

name a great ^{university} process which
which do not reach in the brains
have labored not for themselves but

1 People. You have much Talking
in Invitation. (1) Interest in the new things

in new V.C. We all love him. O.
if for position. (1) ^{the boy mental} Intellectual Eyes -

A good heart. & 3 an ideal
who has in the highest degree that
a womanly gift - the Art of man-
without letting them know they are it &
and it out, why they like it.

in ^{your new V.C.} the last - that heaven of darkness.

Fuller said was a useful feature
of a college - but he was speaking of O.C.

have only two ideas the one a fairly
valued added to a good dinner
state to something that is essential

life of a University - a curious
element, a sort of educational
institution not easy to analyse. ^{TELEPHONE} but the
at once makes itself felt in the
University spirit. ~~University~~

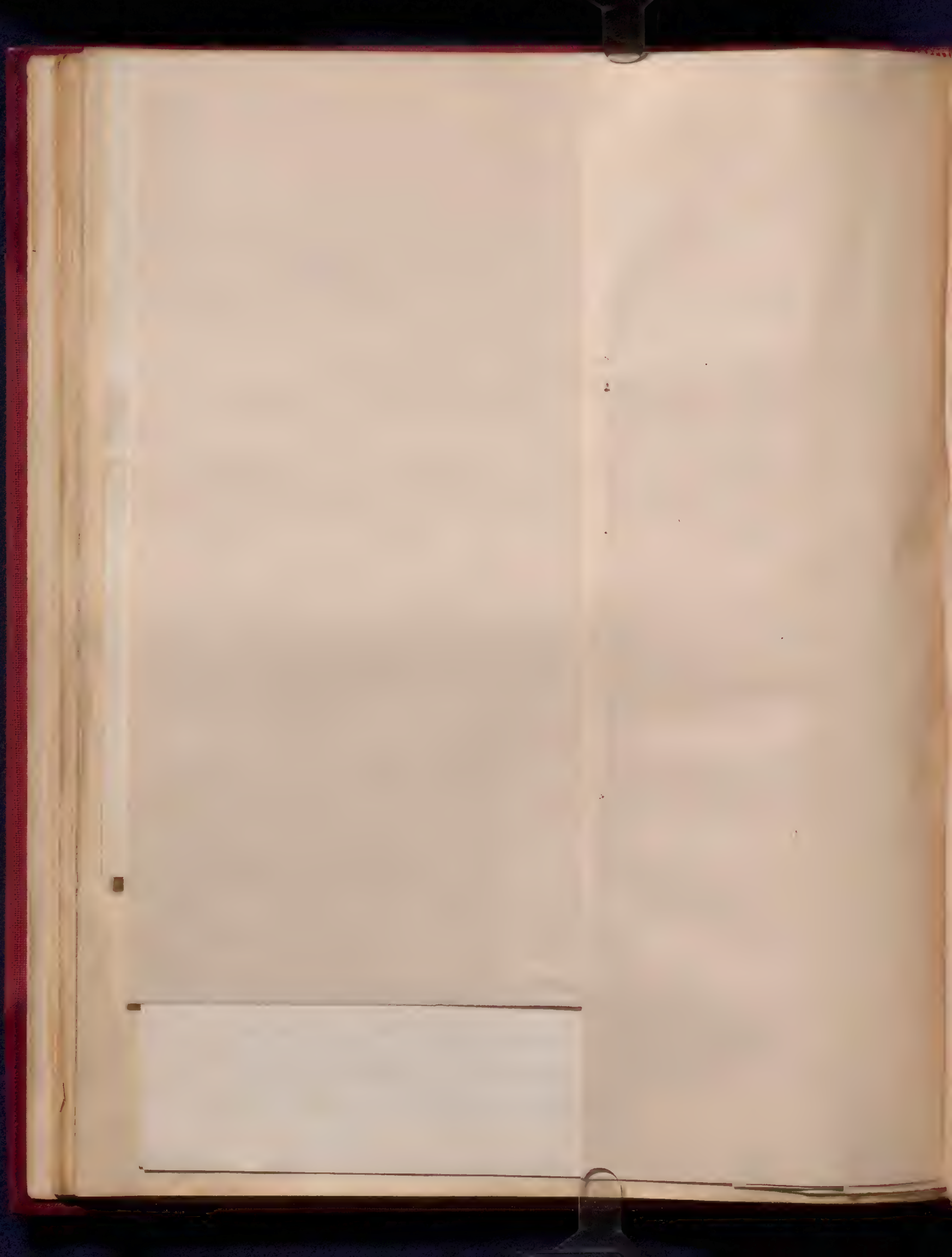
-! By its fruits you may know it -

I hope you will recognize my description
many & good fellowship amid all

of the University - The Court, the
Senate, the Professors, the ^{TART} junior

& students. No jealousies between
- Peace among the Professors, ^{SHEFFIELD} devotion
is to the seniors

by to your chief - no cabals, no
no back-biting work - everything
and, small dealings, all the cards on the table



the patient unassuming genius who made ^{possible} this Age
of Electricity

(d) You can scarcely name a great ^{undisputed} process which
the foundations of which do not rest on the brains
of men who have labored not for themselves but

1 For Practical People. You have much Talking

2 Vice Chancellors Invitations. (1) Interest in the new things
2 Int. in new V.C. We all love him in O.

Three qualif. for position. (1) ^{the mental} Intellectual Eyes -
vision 2 a good heart. 3 an ideal

new V.C. who has in the highest degree that
greatest of all womanly gifts - the art of manag-
ing men without letting them know ~~that~~ as it is
if they do find it out, why they like it.

One qualification ^{your new V.C.} ~~is~~ lacks - that leaven of dulness
which Old Fullon said was a useful feature
in the head of a college - but he was speaking of O.C.

3 Mr. Pro. Chas - I have only two ideas this eve - a fairly
heavy load added to a good dinner

The first relates to something that is essential

in the successful life of a University - a curious
subtle, imponderable element, a sort of educational
radium, an emanation not easy to analyse, but the
presence of which ~~at~~ at once makes itself felt ~~in~~ ⁱⁿ
is known as the University spirit. ~~It is~~
you have it here! By its fruits you may know it -
They are three. I hope you will recognize my descrip-

First. A harmony & good fellowship amid all

Sections of the University - The Court, the
Council, the Senate, the Professors, the junior
teachers & the students. No jealousies between
the Faculties - Peace among the Professors, devotion
of the Juniors to the seniors

Secondly Loyalty to your chief - no cabals, no
intrigues, no back-stair work - everything
above board, all dealings, all the cards on the table

The patient unassuming genius who made ^{possible} this ³ age
of electricity

(d) You can scarcely name a great ~~meaningful~~ ^{understanding} process ~~and~~ the foundations of which do not rest in the brains of men who have labored not for themselves but in ^{the} whole hearted pursuit of truth - in the keen desire to add to the sum of knowledge.

Of course now a days many Euphorbia - all can grow
but flower now when all have lost the seed.

Much of the best independent work comes from Dubon.
connected with great Mass. - E.S. Sir Robert Hallfield

→ This burning desire to add to knowledge ^{The chief} is ^{the} ^{of} manifestation of the Universal Spirit. You cannot manufacture it, you cannot buy it, tis dangerous to seek it too ardently with deliberation it is as elusive as the Sward, and many a man

has formed a Boogin with disastrous ^{as d. 4} effects. Only
here in great manufacturing centres - make no mistake
you live on these fruits. Truly ye have received; freely
give.

That is the idea Mr Pro-ct & I feel lighter in my mind
The other I am not so sure about, Perhaps you are not
ready for it - but you are young & you ^{may} ~~should~~ be - Do you
know O. W. H. Est-^{ling} of age? Offer a man a home in the West
of the morning. - I would offer him a new idea

It relates to your med. school. which has had a long & honorable history, and memorable men who have devoted their lives & spent their money. Arthur Jackson Hon Sec. & widow ch. of aural. Dr. Joseph H. Smith of Pathol. Dr. Cocking...

Back: Phoe - all the money. Mary Teacher not paid all.

Thirdly. A certain attitude towards life among the Pro-
 fessors. Two classes - those who are in the
 world & get all that is possible out of life - those
 who seek to add as much as possible to life
 Great moments frequently the former does. 21

The new idea itself I wish to put into your minds
 in this. Take the movement on with your students
 in the Eng. & Soc. & that of the Eng. & Soc.
 of the change of relationships - that will be in the same
 form as the depth of them. - They are very human
 really. Make the study of them - of great importance
 with its technical, of great value. & to be very
 moving your chairs on modern lines.
 English student has great advantage - & clear.
 English teacher of them & very great discovery
 let me tell you what he wants - very in modern
 1) control of the 100 best, 121 a smack of accidents
 who will work at the problem of the 100 best.
 (3) 25 supposed for the best - for the best - (4)

That is my 2nd idea. even a 1st idea
 let me tell you in the other suggestion - you have a
 small school as great as the 100 best - the 100 best
 with schools. Bill in the Eng. - Bill in the Eng.
 period - all as in the 100 best - the 100 best
 you have been doing it & the 100 best - the 100 best
 & the 100 best - the 100 best - the 100 best

Mr. Pro. Chamberlain. - it is hard to tell any man & the
 on when for any time after dinner. let the 100 best
 & the 100 best - the 100 best - the 100 best
 it seems in what & the 100 best - the 100 best
 you have a great as the 100 best - the 100 best
 & the 100 best - the 100 best - the 100 best
 On our back a great as the 100 best - the 100 best

Outline draft of the address

"The County-Hospital as a Post-graduate Centre."

[delivered April 1st 1914 before the Leicester Medical
Society. Not published.]

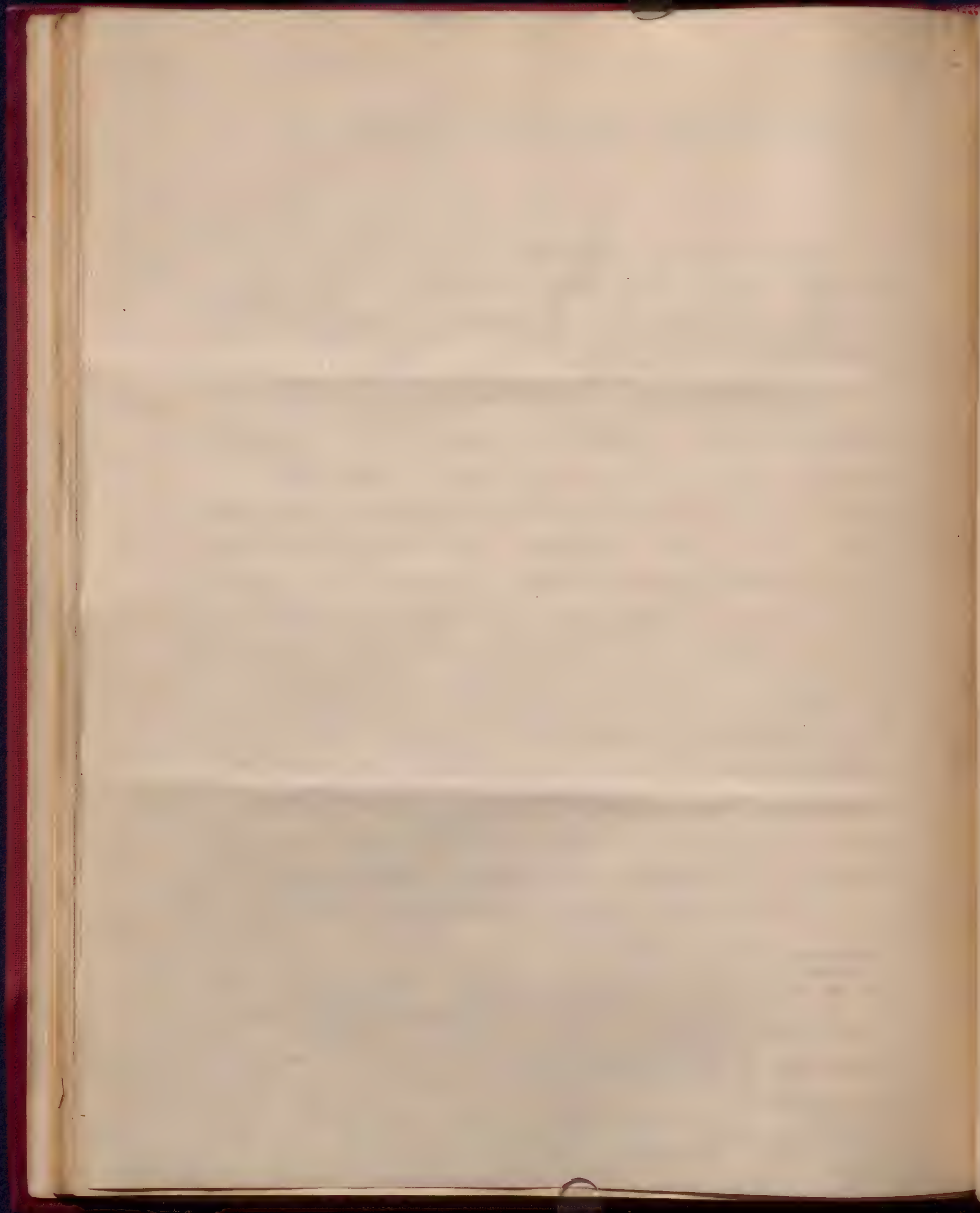
1 birds. A certain attitude of mind
2 causing no harm.

THE COUNTY-HOSPITAL AS A POST-GRADUATE CENTRE.

Plato has a famous dictum that education is a life-long business. Why it is not more often the case. - lack of energy; never lack of opportunity. Let me read you a paragraph which I put as a rubric to one of my occasional addresses.

"The want of energy is one of the main reasons why so few persons continue to improve in later years. They have not the will and do not know the way. They "never try an experiment" or look up a point of interest for themselves; they make no sacrifices for the sake of knowledge; their minds, like their bodies, at a certain age become fixed. Genius has been defined as "the power of taking pains"; but hardly anyone keeps up his interest in knowledge throughout a whole life. The troubles of a family, the business of making money, the demands of a profession destroy the elasticity of the mind. The waxen tablet of the memory, which was once capable of receiving "true thoughts and clear impressions", becomes hard and crowded; there is no room for the accumulations of a long life (Theaet. 194 ff.). The student, as years advance, rather makes an exchange of knowledge than adds to his stores." (Jowett's 'Introductions to Plato'.)

Let ^{now} ~~me~~ talk of lack of opportunity - the environment is secondary, the man everything. Tell the story of the Mayo's, William James essay on The Energies of Man. How little we use! Like our hearts 25%



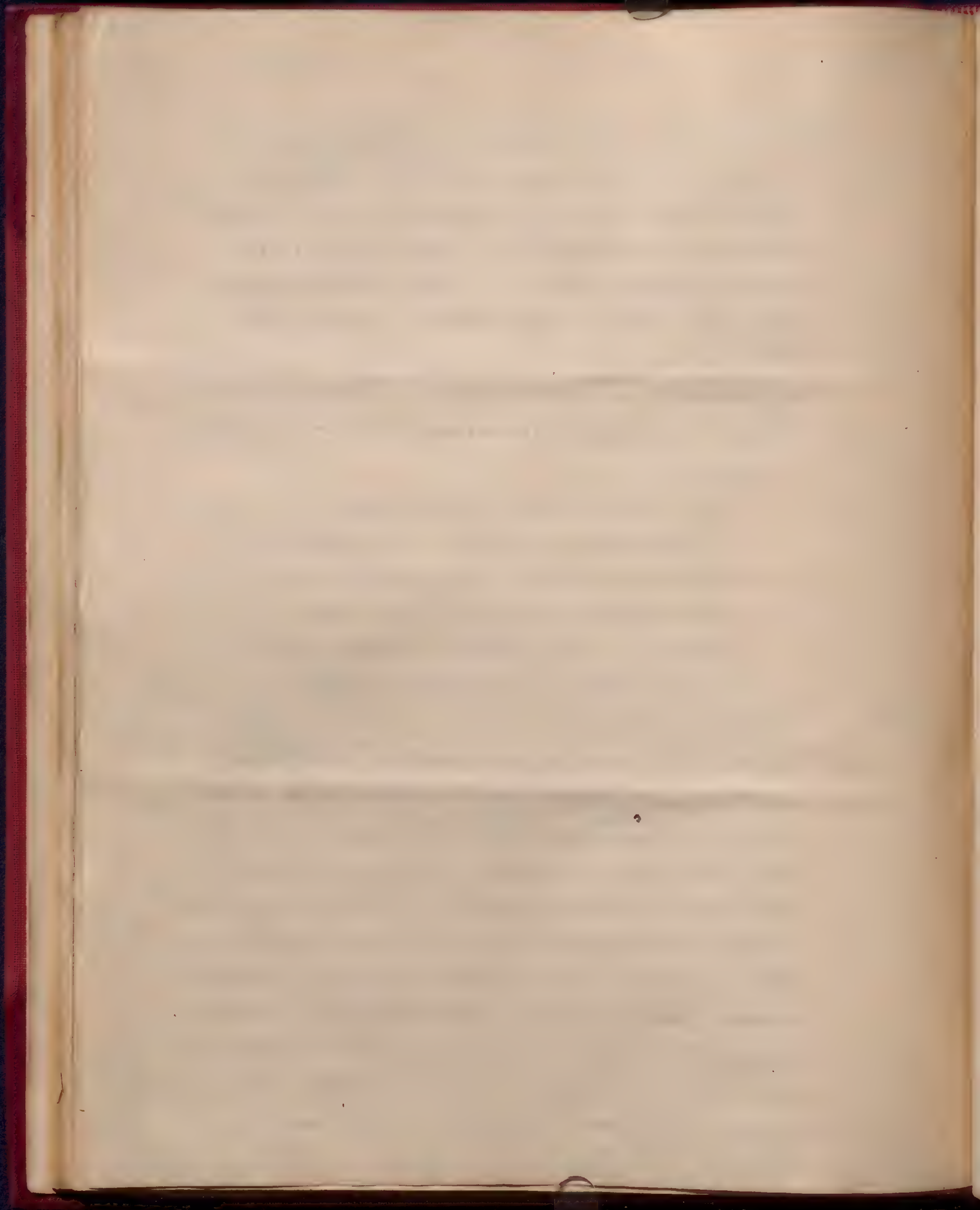
The five factors in the education of the medical man.

Ist. The daily round that brings experience. Medicine is practice full of pitfalls for the best educated. Hippocrates' aphorism comes to all "Experience is fallacious and judgment difficult". How to make the daily round tell? Not by simple accretion, not by a mere accumulation of facts, but by a digestion and assimilation of experience - day by day and week by week. Knowledge does not necessarily bring wisdom - I am never tired of quoting Cowper's lines

"Knowledge and wisdom, far from being one,
Have oft-times no connexion. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge is proud that ^{he} has learned so much;
Wisdom is humble that he knows no more."

2nd. The Laboratory, surgical, microscopical, and chemical.

No man can practice medicine successfully to-day without the help of laboratory methods. How far are they available in the routine of general practice? Just so far as the individual practitioner has the energy and brains. There are three difficulties: (1) the training of our medical students - not familiarity enough with laboratory methods - leave the schools only half trained - we must get rid of lectures and of many superfluous examinations before the student will be properly educated. (2) Lack of time. What can a man do with 30 to 40 people to



to see, a full surgery, and anxious, trying cases. Nothing himself, but by the time he has reached this stage an assistant should be available. - and see to it that he has laboratory ways. (3) Lack of money. Laboratory - but it pays.

3rd. The Library. (a) Private. (b) Local. (3) R.S.M.

4th. The Medical Society. The clearing house of the district. (1) rub off his angles. (2) learn to know his colleagues, and benefit by their experience. (3) get his own experience clarified.

5th. Post-Graduate Courses.

I Development of post-graduate teaching.

(1) In America. (2) In Germany. (3) In England.

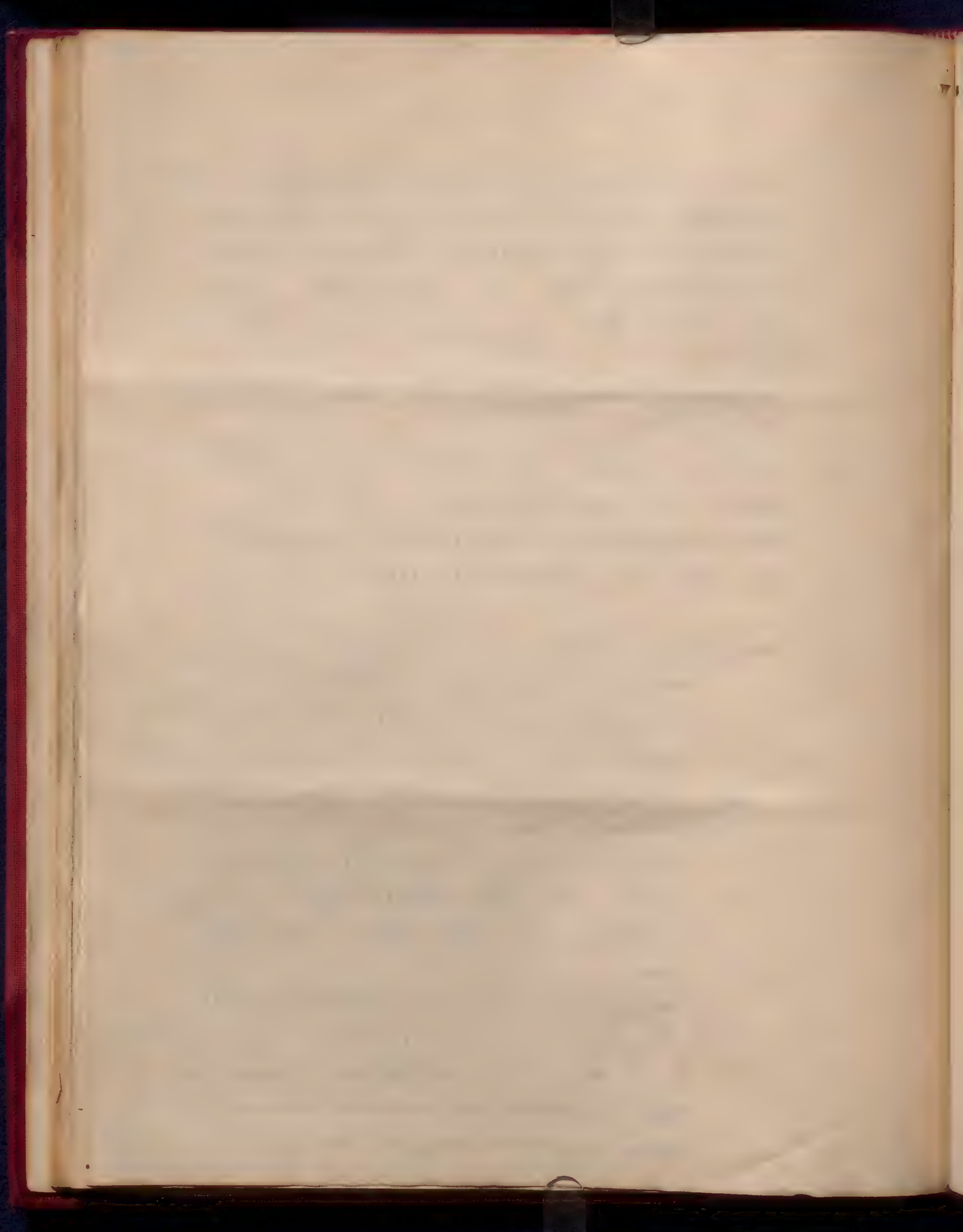
II. New conditions under Insurance Act.

III. The local centre. Characters of the County Hospitals. (a) well equipped, managers and nurses. (b) ample material, out and in-patients. (c) well staffed. - good work done.

Two defects. - (1) Lack of laboratory facilities.

(2) Old fashioned organization.

Good laboratories are everywhere being established in charge of whole-time men.



Leicester Hospital. (1) Beds. (2)

out-patients. (3) Laboratories.

Organization for P. G. Teaching.

(1) Encouraging men to visit the wards
and Out-Patients.

(2) Making the Hospital the consulting
centre for the county.

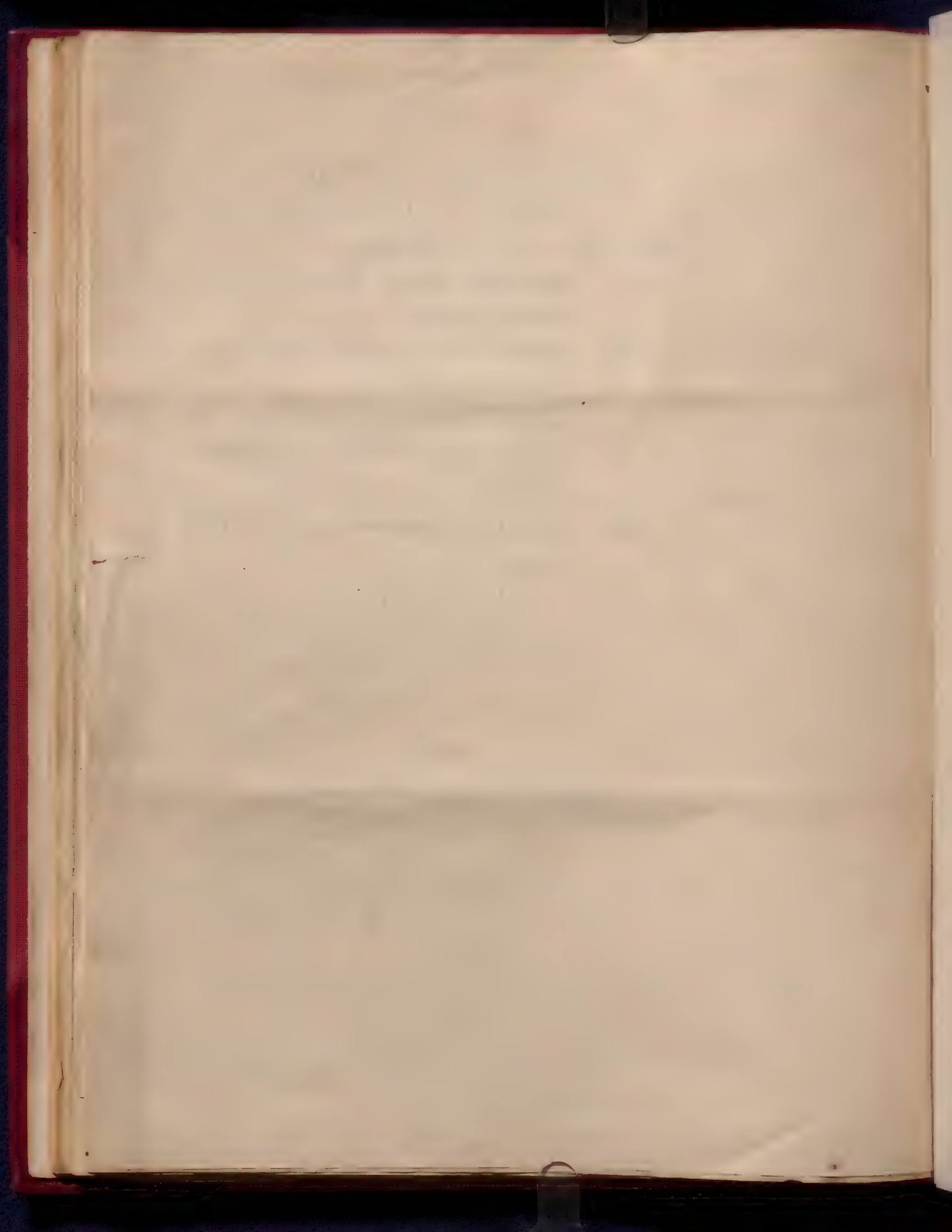
Linking the County Hospital with the

Insurance work. A Consulting Phy-

sician: - *old days: Phys.*

(3) Special Post-Graduate courses.- twice
a year.

(1) Scheme of such a course.



Number 74, iii, (d), leaf 83-93 in the Bibliotheca Oxoniensis

"The Manuscripts of the Religio Medici"

[Not published. Proposed for reading at the Roy. Soc. of Med. Lond., Historical Section, 15 March, 1910. That afternoon Sir William, using lantern slides, spoke chiefly of the handwriting of Sir Thomas Browne, using no notes; he apologized for having left these at home.]

The Manuscripts of the Religio Medici

In 1642 appeared a duodecimo of 190 pages without the name of author, with a quaint title page depicting a man falling from earth into the sea of eternity, grasped by a hand reaching out from the heavens, with the legend a coelo ralsus. [sic]. The title, Religio Medici, and the subscription printed for Andrew Crooke, 1642, and the name of the artist, William Serjeant. The little work at once attracted attention and the Earl of Dorset sent word about it to his friend, Sir Kenelm [sic], who sent to St. Paul's Churchyard for a copy. So delighted was he that he took it to bed and did not close his eyes until he had enriched himself "with all the treasures that are lapped up in the folds of those few sheets" and sent to his friend his observations. Many others besides Dorset and Digby must have been pleased with the little volume, as the edition was so quickly exhausted that Crooke issued a second, again without indication of the author. There is no indication in the Observations that Digby had any idea who had written the work. Word had reached the author, Dr. Thomas Browne, at Norwich, of the intention of Digby to publish his Observations, and on March 3, 1642, he wrote protesting

FROM THE FIRST SETTLEMENT TO THE PRESENT TIME

BY SAMUEL JOHNSON

IN TWO VOLUMES. VOL. II.
LONDON: Printed by J. JOHNSON, in Pall-mall.

1790

THE HISTORY OF THE CITY OF BOSTON, FROM THE FIRST SETTLEMENT TO THE PRESENT TIME, BY SAMUEL JOHNSON, ESQ. IN TWO VOLUMES. VOL. II. LONDON: Printed by J. JOHNSON, in Pall-mall.

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that the little work had been printed without his knowledge or consent from an imperfect and surreptitious copy. He makes the statement of special interest to us in connection with the manuscript, that the piece was contrived in his private study "as an exercise unto myself rather than exercitation for any other, having passed from my hands under a broken and imperfect copy, by frequent transcription is still run forward in corruption, and after the addition of some things, omission of others, and transposition of many, without my consent or privacy, the library of these times committed it unto the Presse, from whence it issued so disguised, the author without distinction could not acknowledge it." He then promised to deliver to the Press the true and intended original "whereof in the meantime your worthy self may command a view." To this Digby replied in a most interesting letter, the original of which is in Bodley, from Westminster House March 20, that he would await with longing the coming abroad of the true copy.

In 1643 appeared "a true and full copy of that which was most imperfectly and surreptitiously printed before under the name of Religio Medici." There is the same frontispiece followed by a statement about the former corrupt copy, then a page of errata, and an address to the reader signed Thomas Browne. In this last, after apologizing in such troublesome days for private complaints, he says that the work was composed seven years ago for his private exercise and satisfaction and being communicated to one friend and then to another "and was by transcription successively corrupted until it arrived in a most depreaved

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BY JOHN GILBERT FROTHINGHAM
OF THE TEMPLE, ESQ.
IN TWO VOLUMES.
VOL. I.
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THE SECOND PART OF THE HISTORY OF THE
REIGN OF HENRY THE SECOND
BY JOHN GILBERT FROTHINGHAM
OF THE TEMPLE, ESQ.
IN TWO VOLUMES.
VOL. II.
LONDON: PRINTED BY J. JOHNSON, ST. PAUL'S CHURCH-YARD, 1795.

copy at the Presse." No doubt he was pleased and complimented that a man of such distinction as Digby should think the little work worthy of the Observations which are usually found bound up with the 1643 edition, though sometimes met with separately.

In the life of Sir Thomas Browne prefixed to the Christian Morals, Dr. Johnson suggests that the surreptitious editions were not issued without the author's knowledge, but the truth of Browne's statement seems borne out by the fact that we know of seven manuscripts of the Religio all of which differ in minor points from each other and from the 1642 and 1643 editions. This is a remarkable confirmation of the statement made in his letter of protest to Digby, that the copies by frequent transcription had been corrupted, some things added, other omitted, and many transposed without his assent or privacy.

Seven manuscripts of the Religio are known:-

- I British Museum. Landsdowne M s. 489. f. 112, consisting of nine and a half closely written pages, folio size; ends Section 15, or in Greenhill's edition at the middle of Section 18 with the words, "can supply all these". It has "Mr. Browne sum Theo, 1639" at the top of the first folio. It is divided into sections and differs in minor particulars from the three early printed copies and from the other manuscripts.
- II Bodleian. Rawlinson Ms. Quarto. 44 folios. Complete. Not divided into sections. Note in Dr. Rawlinson's hand states, "This copy of the Religio

Medici by Sir Thomas Browne, Kt., is very different from all printed." Second part begins at f. 31. Many more words are missed by the transcriber than in any other ms.

III Wilkin I. "Foolscap." 8vo. 83 pp. Beautifully and closely written in a very small hand, the poetry and italics in a taller Italian hand:- about forty lines in a page. In the title Religio Medici in the same hand" (Wilkin - Sir Thomas Browne's Works, Vol. II, Page V.

IV Wilkin II. "4to." 186 pp. Written in a much larger hand - and originally without title. In a different hand at the head of the first page is Religio Medici." In the same hand on the fly leaf is a long latin note attributing the work of a Dr. Read who died in 1641."

Mr. Wilkin gives no indication of the source of these copies, both of which, through the kindness of his daughter-in-law, Mrs. Wilkin, are with the other Sir Thomas Browne papers in the Norwich Museum. Especial interest is attached to Wilkin II which the late Mr. Charles Williams of Norwich claimed to be in the handwriting of Sir Thomas Browne.

V "Pembroke College, Oxford." Presented to the Library in 1783 by the Rev. T. Wrigley. 4to. 37 folios. Complete. Divided into sections (54) but not into 2 parts. Most appropriate that a ms. of the Religio should be in possession of Browne's old college.

VI Havilland Hall (47 Wimpole Street). Small 4to. Book plate of W. B. Dr. Hall's father, Mr. William Hall of Tottenham, wrote

There is a great deal of interest in the
subject of the new building, and it is
expected that it will be completed in
the near future.

The building is situated on the corner
of the street and is a very fine
specimen of the new style of architecture.
It is expected that it will be completed
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to Wilkin, "I found it about forty years ago among some old things that came from Mian's House, Herts, originally occupied by a family of Brown. How my grandfather became possessed of the manuscript I don't know. He died in the year 1792. 227 pages. No division into sections, though the second part is marked, beginning at page 142.

VII Osler Library. Folio size. 124 pages. No division into sections. Second part indicated at page 88. In general character, particularly in the omissions, this manuscript resembles more closely the de Havilland Hall ms. than the others. The manuscript had been in a Lancashire Library for two and a half centuries, bound in a volume of historical pieces bearing dates from 1513 to 1631. It was sold at Sotheby's in 1907.

No one of these seven manuscripts agree in all particulars with each other or with the surreptitious editions of 1642 or the authorized text of 1643. Wilkin's remark, "I am therefore perfectly satisfied that Sir Thomas Browne had several originals written by his own hand, differing from each other. This opinion is confirmed, - by the information of those who knew him, 'that it was his constant practice to make repeated copies of his compositions,' - as well as by an examination of his remaining manuscripts."

The standard text of course, is the 1643 edition, sent to the press by Browne himself. A page of errata, often missing, was printed

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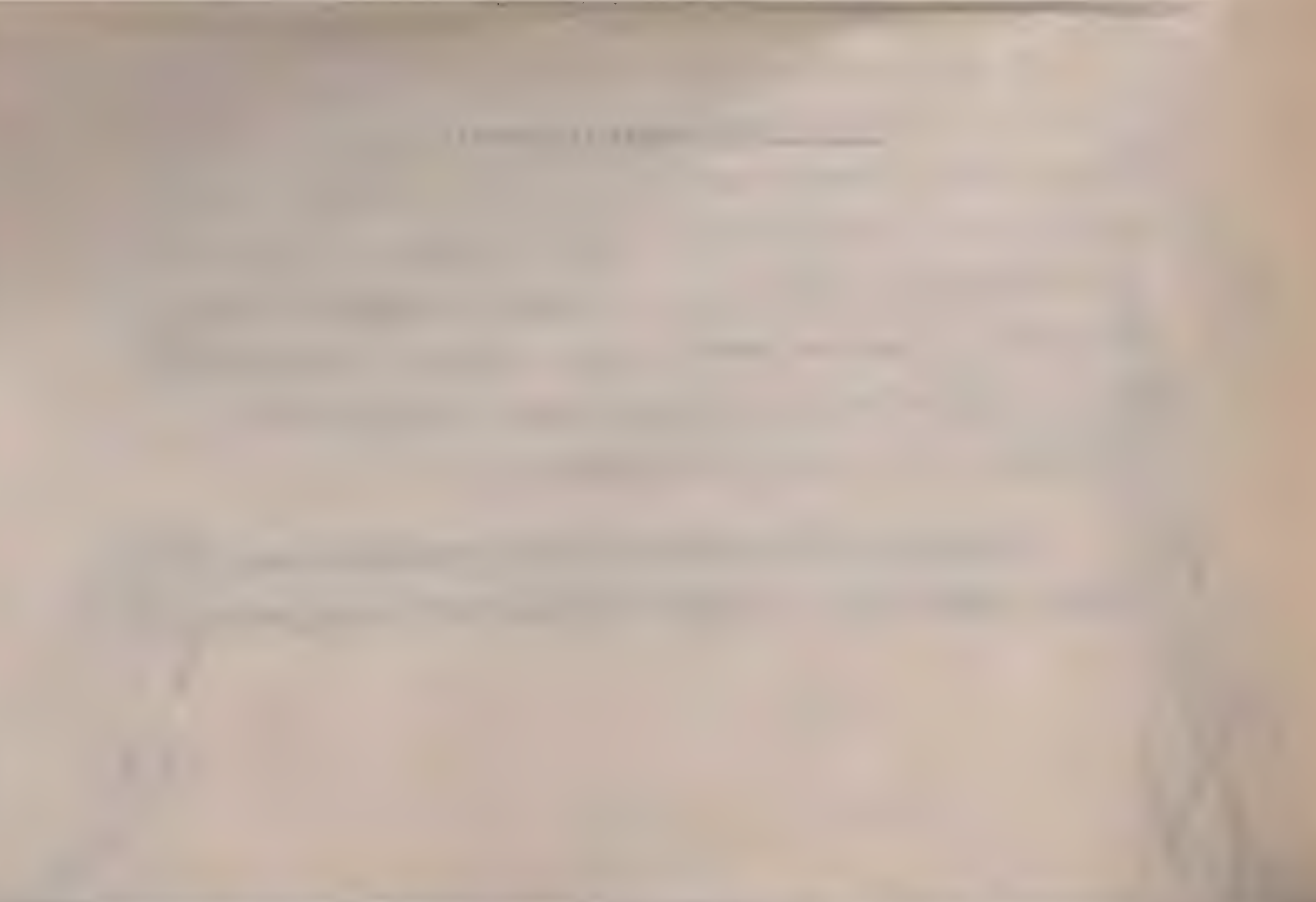
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-11-

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THE
[Faint, illegible text block]



"The manuscripts of the Religio Medici"

[not published. Prepared for reading at the Roy. Soc. of Med. Lond, Historical Section, 15 March 1916. That afternoon Sir William, using lantern slides, spoke chiefly of the handwriting of Sir Thomas Browne, using no notes; he apologised for having left these at home.]



The Manuscripts of the Religio Medici

In 1642 appeared a duodecimo of 190 pages without the name of author, with a quaint title page depicting a man falling from earth into the sea of eternity, grasped by a hand reaching out from the heavens, with the legend a coelo salsus. The title Religio Medici and the subscription printed for Andrew Crooke, 1642, and the name of the artist, William Marshall. The little work at once attracted attention and the Earl of Dorset sent word about it to his friend, Sir Kenelm Digby, who sent to St. Paul's Churchyard for a copy. So delighted was he that he took it to bed and did not close his eyes until he had enriched himself "with all the treasures that are lepped up in the folds of those few sheets" and sent to his friend his observations. Many others besides Dorset and ^{Digby}~~his friend~~ must have been pleased with the little volume, as the edition was ^{so} quickly exhausted ^{that} and Crooke issued a second, ^{again}~~although~~ without indication of the author. There is no indication in the Observations that Digby had any idea who had written the work. Word had reached the author, Mr. Thomas Browne, at Norwich of the intention of Digby to publish his Observations, and on March 3, 1642, he wrote protesting that the little work had been printed without his knowledge or consent ^{from} ~~that it was~~ an imperfect and surreptitious copy. He makes the statement of special interest to us in connection with the manuscript that the piece was contrived in his private study "as an

From the Regius Professor of Medicine, Oxford.

exercise unto myself rather than exercitation for any other, having passed from my hands under a broken and imperfect copy, by frequent transcription is still run forward in corruption, and after the addition of some things, omission of others, and transposition of many, without my assent or privy, the liberty of these times committed it unto the Presse, from whence it issued so disguised, the author without distinction could not acknowledge it."

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(3)

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7 British Museum. Lansdowne Pss. 480. f. 170, consisting of nine and a half closely written lines, folio size; ends Section 19, or in Freshfield's edition at the middle of Section 18 with the words, 'can supply all these.' It has "Mr. Browne sun Theo, 1639" at the top of the first folio. It is divided into sections and differs in minor particulars from the three early printed copies and from the other manuscripts.

From the Regius Professor of Medicine, Oxford.

(5)

II Bodleian. Rawlinson D. Quarto. 44 *folios*
Complete. Not divided into sections. Note in Dr. Rawlin-
son's hand states. "This copy of the Religio Medici by Sir
Thomas Browne, Kt., is very different from all printed". *Second*
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missed by the transcriber than in any other ms.

From the Regius Professor of Medicine, Oxford.

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(6)

III. William I. "Folioscop. 1501. 3 pp. Beautifully and closely written in a very small hand, the poetry and italics in a taller Italian hand :- about forty lines in a page. It has the title Felicio Medici in the same hand" (Wilson - Sir Thomas Browne's Works, Vol II, Page 1)

From the Regius Professor of Medicine, Oxford.

(7)

IV Wilkin II. "4to. 186 pp. Written in a much larger hand - and originally without title. In a different hand at the head of the first page is "Religio Medici." In the same hand on the fly leaf is a long Latin note attributing the work to a Dr. Reed who died in 1611." Mr. Wilkin gives no indication of the source of these copies, both of which, through the kindness of his daughter-in-law, Mrs. Wilkin, are with the other Sir Thomas Browne papers in the Norwich Museum. Special interest is attached to Wilkin II which the late Mr. Charles Williams of Norwich claimed to be in the handwriting of Sir Thomas Browne.

From the Regius Professor of Medicine, Oxford.

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(C)

V Pembroke College, Oxford. Presented to the
Library in 1736 by the Rev. T. Wrigley. 4to. 37 folios.

Complete. Divided into sections (54) but not into 2 parts.

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among some old things that came from [his] house, [it] was
originally occupied by a family of Brown. [His] grandfather
became possessed of the Manuscript I don't know. He died in
the year 1792." 263 *pages*. No division into sections, though
the second part is marked, beginning at *page* 142.

From the Regius Professor of Medicine, Oxford.

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VII Osler Library. Folio size. 180 pages. No division into sections. Second part indicated at *page 88*. In general character, particularly in the omissions, this manuscript resembles very closely ^{the} ~~that of~~ *de* ^{ms.} *Exvilland* ^{all} than the others. The manuscript had been in a Lancashire library for two and a half centuries, bound in a volume of historical pieces bearing dates from 1613 to 1631. It was sold at Sotheby's in 1906.

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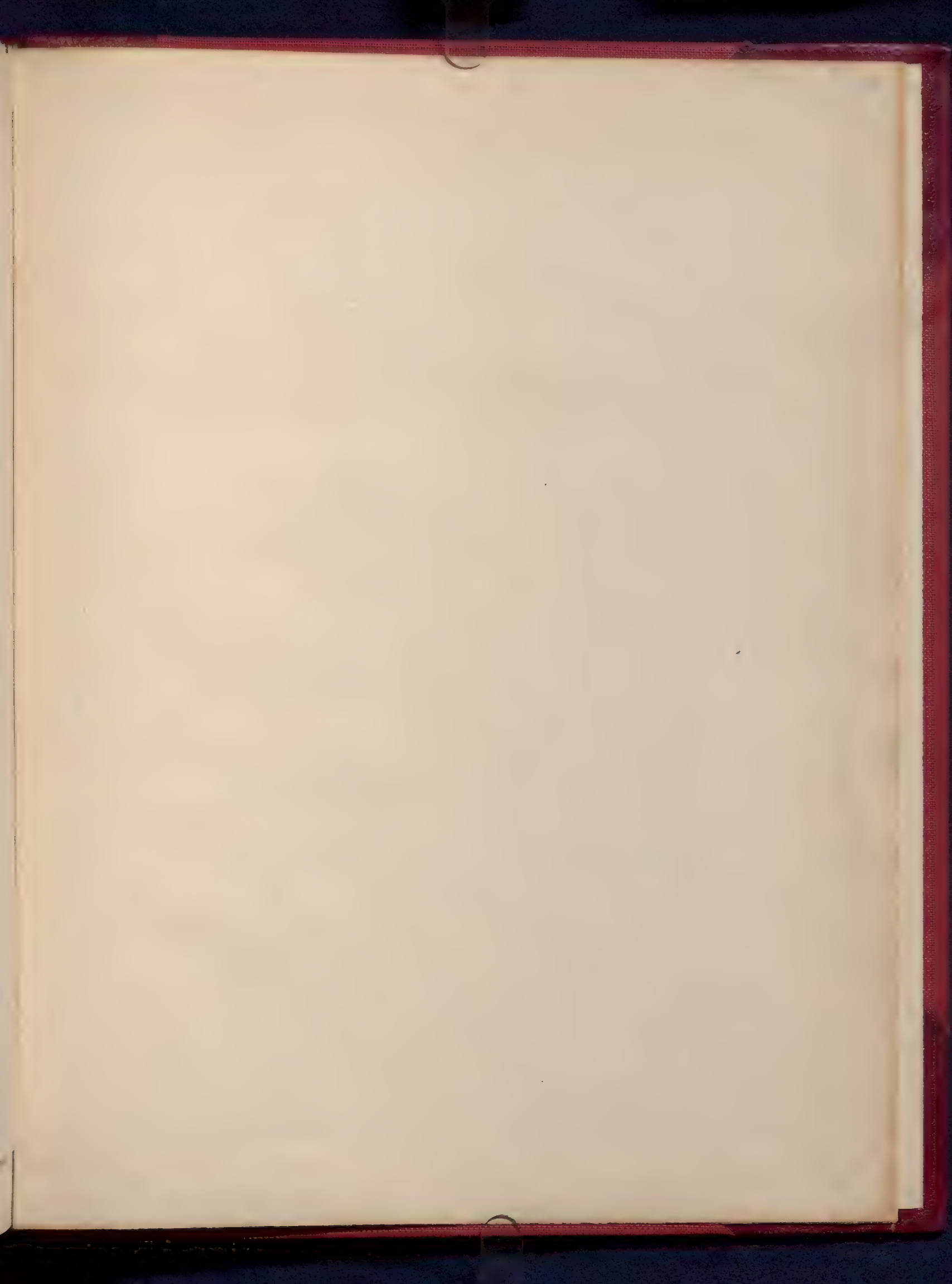
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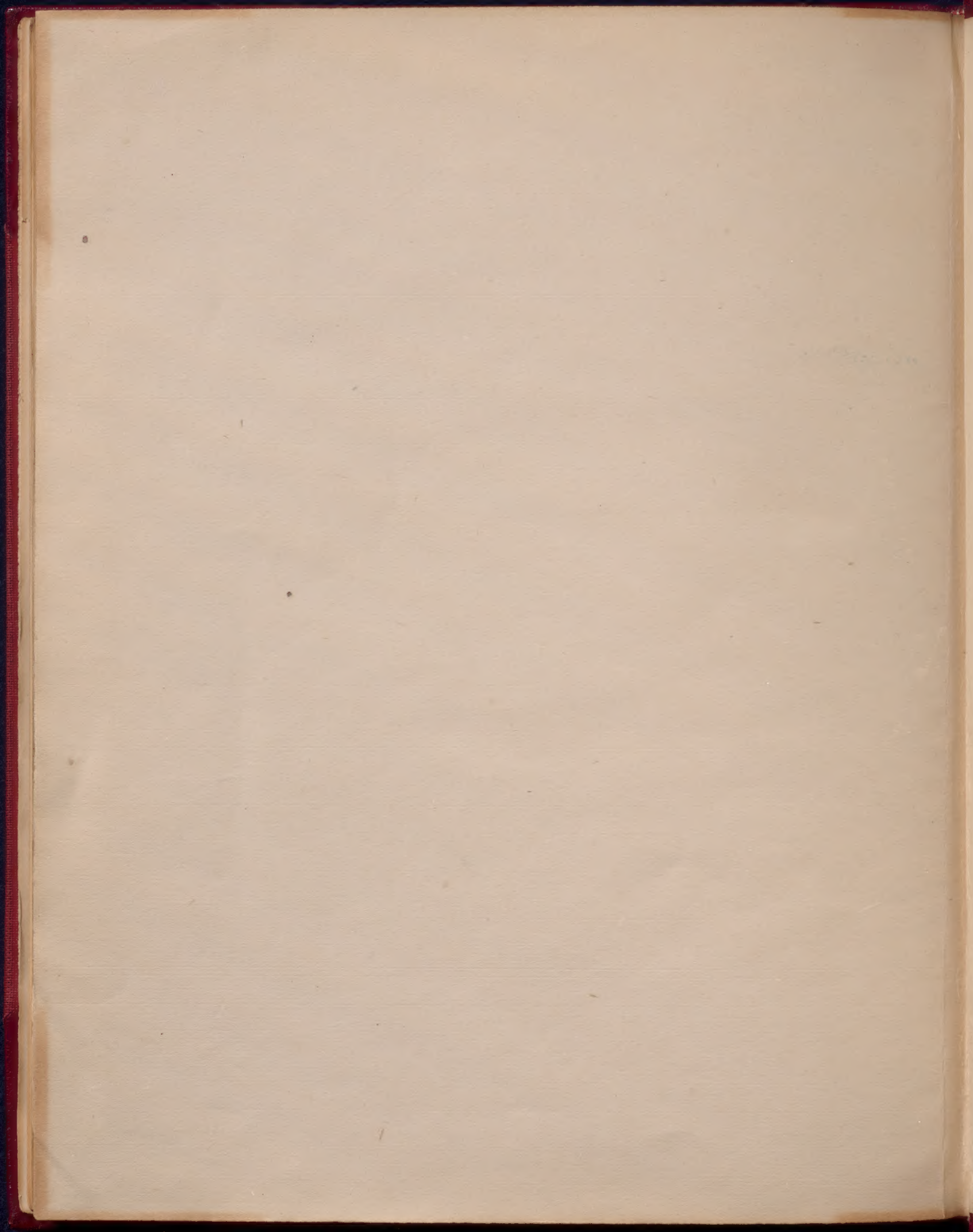
From the Regius Professor of Medicine, Oxford.







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Really iv + 10.4 leaves, for foll. 23, 36, 45, 62, 71, 76,
79 and 83 are double.

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Niche 3

Folio

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